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BREEDERS' DIRECTORY.

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Registered Galloway Cattle. Also German Coach, Saddle and Trotting-bred horses. World's Fair prize Oldenburg Coach stallion, Habbo, and the saddle stallion, Rosewood, a 16-hand, 1,100-pound son of Montrose, in service. Visitors always welcome. Address **BLACKSHERE BROS., Elmdale, Chase Co., Kas.**

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Percheron and Roadster Horses and Shetland Ponies; also one Denmark Saddle Stallion; also Shorthorn Cattle. Stock of each class for sale.

Also a car-load of young Shorthorn bulls for sale. Pedigrees guaranteed. Address

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FRENCH POULTRY YARDS— FLORENCE, KANS.

Houdans. \$1 per sitting of 13.
E. FIRMIN, Proprietor.

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E. R. Lock's Barred Plymouth Rocks are still in it. Twice in succession my birds have won all of the prizes where shown. Write me for prices on stock. Eggs \$1 to \$2 per 15. Catalogue free for writing.
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BARRED PLYMOUTH ROCKS

From Prize-Winning Strains.

Eggs now for sale; sitting of 15, \$2. For further information address **J. P. JOHNSON, Junction City, Kans.**

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Fifteen White P. Rocks, 15 Silver Wyandottes, 20 Brown Leghorns, 10 Light Brahmas, 10 S. S. Hamburgs, 10 Black Langshans, 5 Black Javas, 12 Pekin drakes. All strictly first-class. Some are scored by Hewes and others.
A. H. DUFF, Larned, Kans.

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THOROUGHbred BUFF COCHINS

Eggs and stock from prize-winners at Kansas State Poultry Show, January, 1899. Write for description and prices. Address **H. T. & L. C. FORBES, Topeka, Kans.**

PRIZE-WINNING LIGHT BRAHMA CHICKENS

...EXCLUSIVELY...

Our record for 1898-99: Won 5 out of 6 first premiums at State show in Topeka, including sweepstakes, in January, 1899. Won 6 out of 7 first premiums, including sweepstakes in Asiatic class, at Sedgwick (Kansas) show in December, 1898. Won 6 out of 6 first premiums, including sweepstakes, at Butler County show, held in Eldorado, December, 1898. Eggs \$1 to \$3 per sitting. Also breeders of Red Polled cattle. Address **CHAS. FOSTER & SON, Eldorado, Kans.**

ROCKS WHITE and BLUE BARRED

Five Pens—Three Barred, Two White.

One pen headed by E. B. Thompson Ringlet cockerel; one by a grand Lash cockerel; one by a bird of the Conger strain. My White Rocks are from Madison Square Garden winners—large, pure white birds. Eggs, \$1 for 13, \$2 for 30, \$3 for 50, \$5 per 100. White Guinea eggs same. Write for descriptive circular and prices. Printed recipe for making and using Liquid Lice Killer, 25 cents. Address **T. E. LEFTWICH, Larned, Kans.**

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I am now selling Eggs for Hatching at one-half of former price. There's plenty of time yet to get out a lot of good chicks, if you "get a move on you." Send for circular giving matings and prices of eggs for 1899. Its free for 1 cent stamp.

I also sell all kinds of POULTRY SUPPLIES. If in need of anything, write me for prices. Guide to Poultry Culture, catalogue and price list sent for 10 cents (silver or stamps). It tells all about feeding and raising chicks and may be worth dollars to you.

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SEEDS AND POULTRY SUPPLIES.

Seeds, bulbs and poultry supplies, T. Lee Adams, 419 Walnut street, Kansas City, Mo.



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CATALOGUES FREE; DROP US A POSTAL.

Agricultural Matters.

RAPE AS A FORAGE CROP.

The Kansas Farmer has no desire to "boom" any crop. Inquiries, however, indicate a desire to find a suitable crop for late pasturage and to supplement the grass during dry weather. To meet the demand for information along this line we present the following excerpts from a bulletin just issued by the Department of Agriculture:

"Throughout a large portion of the United States farmers and stock-raisers could advantageously grow more of the succulent forage crops for feeding stock during the summer and autumn months, when the supply of grasses and clovers is often limited. Such crops may usually be grown on land that has already produced an early maturing crop of some sort, such as oats, rye, or wheat. One of the best of these succulent crops is rape (*Brassica napus*, Linn.), a plant closely related to cabbage, turnips, and several other garden and field crops.

DESCRIPTION.

"Rape is much like the Swedish turnip or rutabaga in appearance, but the root is more like that of cabbage. The leaves are large, glaucous, smooth, spreading, and variously notched and divided; the flowers are bright yellow, nearly one-half inch in diameter; the seeds are produced in pods usually 2 inches or more long.

"Under ordinary field conditions the plant reaches a height of from 1½ to 4 feet, and the strong-growing roots penetrate the soil to a considerable depth.

"Rape is either annual or biennial. The annual varieties (summer rape) are grown chiefly for the seed, and have not been much cultivated in this country. The biennial varieties (winter rape) are used largely for forage.

NATIVITY, USES, AND EXTENT OF CULTIVATION.

"Rape, like the turnip, is a native of northern Europe, ranging eastward into Siberia. Although it has long been cultivated in the Old World, it has received but little attention in America until within comparatively recent years, and is now much more widely grown in Canada than in the United States. Practically, all the rape grown in this country is the winter or biennial sort, but in Europe, especially in England, summer rape is widely cultivated. The seed yields about 33 per cent of expressed oil, which is of value for lubricating, and is also used for lighting. The compressed rape-seed cake is used as a food for stock and as a fertilizer. It is regarded as particularly valuable as a fertilizer for flax and turnips. The seed is much used as a bird food. In this country rape is grown almost exclusively for forage, being used chiefly for soiling and summer and autumn pasturage.

"Rape is best adapted to rather cool, moist climates, such as prevail in portions of Canada and the northern United States. It can, however, be successfully grown as a forage crop in many of the warmer and dryer sections. Thus in favorable seasons or with a small amount of irrigation excellent crops of rape are grown in Wyoming, Montana, the Dakotas, and other States in the so-called semiarid region, and many instances are on record where good crops have been produced without irrigation, under conditions of drought so severe as to cause the failure of corn and other farm crops. In parts of the South rape may be grown for late fall or winter forage.

SOIL REQUIREMENTS.

"For its best development rape requires a rich, moist, loamy soil, and will usually do well on any but light sandy soils and stiff clays, such soils being usually deficient in vegetable matter. In general a soil that will produce good crops of turnip, cabbage, wheat, and corn will be suitable for rape.

"Rape is a gross feeder and draws quite heavily on the nitrogen as well as the mineral constituents of the soil, and hence should be used in rotation with crops that feed largely on other elements of plant food. For example, rape and fodder corn take about the same proportion of nitrogen, potash, and phosphoric acid from the soil, and experience has shown that corn does not do well after rape, unless the land is naturally rich in these substances. Results obtained at the North Dakota Experiment Station indicate that the growing of a crop of rape on land that has been sown to wheat for a number of years produces a decided increase in the yield of wheat from the succeeding crop. This is a point of much value in regions where wheat is extensively grown.

VARIETIES.

"All the varieties of rape that have come into prominence in American agriculture are winter or biennial sorts. Dwarf Essex or English rape has been most widely cultivated. Recently a variety has been placed on the market under the name of Dwarf Victoria rape, or simply Victoria

rape, which has given excellent results in New England and also in the Northwest, yielding, as a rule, rather better than the Dwarf Essex. At the New Hampshire Experiment Station this variety is reported as yielding nearly 50 tons of green fodder per acre, and yields of 25 to 30 tons per acre are reported from South Dakota and elsewhere in the Northwest. Under average conditions a yield of from 10 to 20 tons or more may be expected from either of these varieties.

CULTURE.

"Owing to the great variety of ways for utilizing rape and the many places it may occupy in the rotation of crops on the farm, there are numerous methods of culture that may be followed in growing it. When it is grown as the primary crop of the season the land should be prepared by deep and thorough plowing, preferably early in the preceding autumn. In some soils a second plowing should be given in the spring before the seed is sown, but in soils that are naturally loose and mellow, such as are found in portions of the Northwest, a simple stirring of the surface with a cultivator or disk harrow will often be sufficient. The land should be well pulverized by harrowing before the seed is sown. When the land needs fertilizing barn-yard manure may be applied before plowing in the autumn, or if the land is plowed twice the manure may be spread on during the winter or early spring before the last plowing. Commercial fertilizers may be applied by harrowing in at the time that the land is being pulverized previous to seeding. Whatever treatment the land is given in preparation for this crop it should be such as to afford a deep, mellow seed-bed, as free as possible from noxious weeds.

SEEDING.

"Throughout the Northern States generally, seeding may take place from the first of June or possibly earlier, to the middle or last of July, according to the season and locality. In the South the seed may be sown in September or early in October. Under favorable conditions 2 to 3 pounds of seed per acre will be sufficient and it will never be necessary to use more than 5 pounds per acre. The seed should be planted in drills far enough apart to allow cultivation. In practice the distance varies, but it is seldom less than 20 inches nor more than 32; 24 to 28 being perhaps the most satisfactory, all things considered. For planting small fields any of the common garden drills will be found quite satisfactory, but for large fields a grain drill with some of the feed hoppers closed may be used. When the ground is clean and in proper condition otherwise, good results may be obtained by using the grain drill with all feed hoppers open, and giving no after cultivation. As a rule, however, it will be best to plant in wide drills and give sufficient shallow cultivation to keep the soil in good physical condition and destroy weeds. With favorable soil and climatic conditions, good crops of rape may be obtained from broadcast seeding, but whenever there is any danger of the surface soil becoming very dry during the time the seed is germinating, or when land is at all foul, drilling will give much better results.

AS A CATCH CROP.

"When rape is grown as a secondary or catch crop it will not often be possible to pay so much attention to the preparation of the soil and the time and method of seeding, and quantity of seed used may be varied to suit the circumstances. Often fine rape may be grown on land that has already produced a crop of some of the early maturing cereals, such as rye, oats, or barley. As soon as the crop of grain is removed, the land is plowed or "disked" and at once seeded to rape. Field peas and other early maturing forage crops, or rye or winter oats that have been pastured off in spring may also be followed by rape with profitable results.

"Another practice which is coming into favor in some sections of the country is to sow rape in the spring with some grain crop, such as wheat, allowing the former to take possession of the field when the latter has been removed. This method is especially satisfactory when succulent forage is desired for fall feeding. Rape may also be sown in the corn-field just before the last plowing, as is often done with rye and winter wheat.

AS A WEED DESTROYER.

"Aside from its value as a forage, rape is an excellent crop to grow on fields that are foul with weeds. The late date at which the seed may be sown allows the weeds to get well started before the final preparation of the soil begins, they are further kept in check by the cultivation required for the crop during its early growth and later the rape plants shade the ground so completely as to keep the weeds down. An excellent treatment for a foul field is to plow thoroughly in late summer or early autumn and seed to rye or some other forage crop to be pastured off during the fall, winter, or early spring. When the crop has been pastured sufficiently and before

the weeds have produced seed, plow again, plant rape in drills and give thorough cultivation. There are few weeds that will survive such treatment and the land will have given profitable returns in forage in the meantime.

HARVESTING AND UTILIZING THE CROP.

"The rape is usually ready for use in about 8 or 10 weeks from the date of seeding. The general practice is to use it as a soiling crop or as pasturage. Sheep and swine may be turned into the field and allowed to remain until the rape is pastured off. Cattle may also be allowed to run in the field, but as they waste much of the forage by pulling up the plants and trampling them down it is a better plan to cut the rape with a scythe or mower and feed it to the animals.

"With sheep and cattle care should be taken at first not to allow the animals to eat too much, as there is danger of injury from bloating. Hungry animals should not be allowed to eat their fill, and it is not best to turn them into the rape when the leaves are wet. There is no danger of bloating with swine. It is an excellent plan to have the fields so arranged that the sheep and cattle have access to an open pasture as well as to the rape. Animals should have free access to salt at all times when being pastured on this crop.

FEEDING VALUE.

"Rape has a high feeding value. It makes an excellent feed for fattening sheep and swine and for producing an abundant flow of milk in milch cows. On account of danger of tainting the milk many people do not feed it to the cows until after milking. Rape can be used to good advantage as a part of the ration for animals that are being fed in pens for market or for the show ring. It is also a valuable food for young lambs at weaning time. By beginning as early as practicable in the spring and seeding at intervals of two or three weeks, a continuous succession of rape can be produced throughout the period when the permanent pastures are most likely to be short. Rape will endure quite severe cold weather and thus will last a long time after the ordinary pasture grasses succumb to the frost. By the use of this crop stock can be gotten into good condition for the holiday markets or for winter and there need be no check in growth, fat, and milk production through insufficient succulent food during the late summer and autumn months, as is too frequently the case.

"Under favorable conditions two or three cuttings may be made in a single season from a field of rape grown as a primary crop. Mr. W. H. Heidman, of Kalispell, Mont., reports three cuttings the first season with a heavy yield of forage. He allowed the plants to stand the second season and obtained a fine yield of first-class seed. Not much attention has been paid to growing rape for seed in this country, possibly because of the fact that in most localities where this crop has been extensively grown the winters are so severe as to destroy the plants. It seems, however, that there are localities where rape can be profitably grown for seed and farmers might well devote more attention to this feature of rape growing since most of that now used is imported."

Pasturing Alfalfa.

Editor Kansas Farmer:—In compliance with your request, I will say that I have pastured alfalfa more or less for the past ten years, and have not yet lost my first animal from bloat. I simply let the stock begin picking on it as early in the spring as they please, which is long before they can get a good bite, and as the alfalfa grows they get more and more each day and soon get all they want. I never take them off to allow them to get hungry, and they will not eat greedily at any time, but will eat a little at a time, lying down often. I do not claim that this method will render the pasturing of alfalfa entirely safe under all conditions, but it has certainly reduced the risk to a very low point with me. Here in the dry end of the State we have few fogs or very heavy dews and little rain, and there is little danger when it is dry and the stock are not turned on hungry. It will never be safe to turn hungry stock on rank alfalfa when wet.

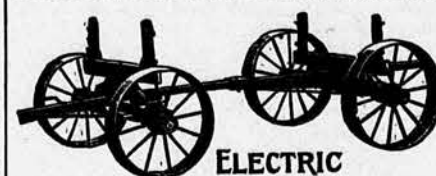
Pence, Kans. W. D. RUSSELL.

Does Listing Waste Fertility?

Editor Kansas Farmer:—I should like some of your correspondents to give their experience in listing and check-rowing corn. I will give mine. I am too old to farm, so I rent my land. A few years back my renter plowed and planted; now he is listing, so he has nothing to do all April after sowing oats, but the first of May out he goes with the lister. One man lists in 100 acres; then he rests again for a week or so; then out he goes with that wonderful Kirlen disk scatterer and scatters the dirt thrown up by the lister but cuts hardly any weeds. The second time he puts a little dirt around the corn. His

Farm Wagon Economy.

The economy of this proposition is not all found in the very reasonable price of the wagon itself, but in the great amount of labor it will save, and its great durability. The Electric Wheel Co., who make this Electric Handy Wagon and the now famous Electric Wheels, have solved the problem of a successful and durable low down wagon at a reasonable price.



ELECTRIC

This wagon is composed of the best material throughout—white hickory axles, steel wheels, steel hounds, etc. Guaranteed to carry 4,000 pounds. These Electric Steel Wheels are made to fit any wagon, and make practically a new wagon out of the old one. They can be had in any height desired and any width of tire up to eight inches. With an extra set of these wheels a farmer can interchange them with his regular wheels and have a high or low down wagon at will. Write for catalogue of the full "Electric Line" to Electric Wheel Co., Box 46, Quincy, Ill.

cultivator does not go in the solid ground but leaves a channel for the water to run off the land. My farm, as well as others around me, loses hundreds of tons of earth. The rain washes half of the corn out; then the renter replants, but the replanted seldom comes to anything. The last time he goes with a cultivator the ground is so hard that he can do but little good. A neighbor of mine plowed and planted last year and had 30 bushels per acre. Mine had only 12 bushels per acre. In a few years I think farmers who list in Washington County will have nothing but gumbo and little corn.

Palmer, Kans. A SUBSCRIBER.

Deafness Cannot Be Cured

by local applications, as they can not reach the diseased portion of the ear. There is only one way to cure Deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube is inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed, Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that can not be cured by Hall's Catarrh Cure. Send for circulars, free.

F. J. CHENEY & CO., Toledo, O.
Sold by Druggists, 75c.

Low Rates to the East.

Your attention is directed to the exceptionally low rates in effect this coming season to nearly every prominent point in the East.

Never before has such an excellent opportunity been afforded for a Summer Vacation Tour, or for visiting friends in the East. We mention below a few of the places to which greatly reduced rates have been made. The Union Pacific is the line that will give you the best service to any of these points.

Columbus, Ohio, June 6-9. Rate—One Fare, plus \$2.00, for the Round Trip.

St. Paul, Minn., June 9-13. Rate—One Fare and One-Third for the Round Trip, on Certificate Plan.

Buffalo, N. Y., June 14-15. Rate—One Fare, plus \$2.00, for the Round Trip.

Chicago, Ill., June 14-15. Rate—One Fare and One-Third for the Round Trip, on Certificate Plan.

Milwaukee, Wis., June 14-16. Rate—One Fare and One-Third for the Round Trip, on Certificate Plan.

St. Louis, Mo., June 20-23. Rate—One Fare, plus \$2.00, for the Round Trip.

Detroit, Mich., July 5-10. Rate—One Fare, plus \$2.00, for the Round Trip.

Richmond, Va., July 13-16. Rate—One Fare, plus \$2.00, for the Round Trip.

Indianapolis, Ind., July 20-23. Rate—One Fare, plus \$2.00, for the Round Trip.

For full information as to dates of sale and limits, on tickets, time of trains, etc., call on F. A. Lewis, city ticket agent, or J. C. Fulton, depot agent.

First of the Season.

Excursion to Buffalo via the Nickel Plate Road, at one fare for the round trip. Tickets on sale June 11, 12 and 13, good returning to and including July 2, 1899, providing they are deposited with joint agent in Buffalo on or before June 17, 1899. Do not miss this opportunity of visiting Buffalo and Niagara Falls at a very reasonable expense. City Ticket Office 111 Adams St., Chicago. Depot, Van Buren Street Passenger Station, Chicago, on the Elevated Loop. (10)

The Stock Interest.

THOROUGHbred STOCK SALES.

Dates claimed only for sales which are advertised or are to be advertised in this paper.

NOVEMBER 1—W. T. Clay, Plattsburg, Mo., Short-horns.

BY-PRODUCTS OF STEERS.

A writer in the New York Sun points out one of the methods by which the great packing-houses are able to starve out the local butcher and to make inordinate profits on margins by which the small operator can not exist. He says:

"The great Chicago packing-houses get a great deal more money for the by-products incidental to the killing of a steer than the meat sells for. On the average the meat and its compounds bring \$40, while the by-products bring in at wholesale \$55. The latter sum is roughly made up as follows: Hide, horns, hoofs, and hair, \$25; fats, blood, sinews, and bones, \$15; miscellaneous other wastes, \$15.

It is only in the large and well-appointed slaughter-houses that the full value of the animals dealt with can be realized, and these become factories for a great many products, besides finding the proper and most profitable markets for each of the raw products into which they separate the animals. Nothing is allowed to go to waste, and ten years ago one of the largest butchers in this city declared that the Chicago packers were paying the entire cost of slaughtering cattle out of what the butchers here were paying to have carried away. Hides, horns, hoofs, and hair have had their markets for many years, and their value increases steadily. This is particularly true of horns, for the practice of de-horning cattle has become so general that in one great Chicago packing-house it was found during a two-year count that the returns only showed one horn to every three bullocks. Horns are now worth about \$150 a ton. The hides go to the tanner, the hair for mixing in mortar. The tails don't go with the hides. Down at the tip is some long hair, and this is sold to be turned into curled hair for upholstery.

"If the hoofs are pure white they have a peculiar value. They are sent to China for jewelry-making. Those which are striped, black or damaged go into the kettle to be boiled for glue, and the residue made into hoof-meal, a valuable fertilizer. In fact, everything which is not used for other purposes is at last turned into some form of fertilizer, even to the tankage water in which the coarsest of the refuse is boiled to extract its fats. The coarse bones are either carbonized and sold for sugar refiners' use or turned into fertilizers, and the blood is mostly dried and turned into another aid to agriculture. Some of the blood is sold in liquid form to sugar refiners, but not a great deal. The white bones suitable for knife handles and such purposes bring from \$70 to \$90 a ton and go mostly to Germany.

"The main parts of the animal as they are sent to market are all carefully trimmed but there is no piece of good meat but has its market. Tongues and tails are regular articles of commerce, and even the meat from the cheeks is added to the supply for sausages and the lips are cut off and pickled. Each character of fat is separated from the other and finally these are marketed in the various forms of neat's-foot oil, oleo-oil, tallow, and stearine, and oleo-margarine. Before the horns are sold the pith is extracted from them and the finest grade of gelatine is obtained from the pith.

"The sinews are all separated to be used for glue stock, the bladders are sold for holding snuff and the greater part of intestines are used for sausage casings. Parts of these have, however, a special use and value, and are sold separately to be made up into gold-beaters' skins. The lining of the windpipe is also of particular value, being used for a fancy sausage casing and also is a lining for pipes through which beer is passed in breweries. Beef extract, pepsin, and many other things are made in some of the biggest houses.

"A new use has recently been discovered for the contents of the paunch, which until lately had to be thrown away. It has been discovered that a good quality of cardboard can be made of it, and it is now being saved for that purpose. Of course, the large receipts from these by-products are not all profit, but there is a manufacturer's profit made out of each one of them which aggregates a handsome sum, and all of this helps to keep down the price of fresh meats to the consumer."

Step Toward Progress.

The demand for good breeding stock all over the country is better than it has been for years. Farmers who have got rid of their scrub stock and who are in a position to build up anew see the advantages in beginning right and are anxious to get good blood as a foundation. Northern farmers have not given as much attention to this

important matter for some years past as they should, and it is generally conceded that herds have gradually deteriorated since the depression struck the fine cattle business a few years ago, for the same reason that the supply of fine horses has run so low. Lately Texas stockmen have shown the greatest ambition to build up their herds, and have come North and bought up a vast amount of the best blooded stock that is really needed in the States where produced. This new demand has set northern stockmen to thinking, and this is the first step toward progress.—Chicago Drivers' Journal.

BREEDERS' ANNUAL REPORT.

The Kansas Improved Stock Breeders' Association has just issued from the press of the Kansas Farmer its first published Annual Report in book form. It contains an introduction by Secretary Coburn, a history of the live stock organizations in Kansas by Secretary H. A. Heath, the full proceedings of the ninth annual meeting of the Kansas Improved Stock Breeders' Association, and the consolidation of the other live stock organizations of the State with it, together with the addresses, papers, and discussions as to the various branches of the animal industry of Kansas and live stock husbandry in general.

It is the first distinctive live stock report ever issued for Kansas and is a veritable live stock manual for the State. The Report also contains the Association's Kansas Breeders' Directory for 1899. As the Association receives no State aid, but is supported entirely by its membership fee of \$1 per year, it has been decided to charge a nominal price for the annual report, as follows: Single copy, 25 cents; 10 copies, \$1.50; or 100 copies, \$10. Address all orders, or applications for membership to H. A. Heath, Secretary Kansas Improved Stock Breeders' Association, Topeka, Kans.

A Word for the Mule.

A writer in the Harness Gazette says: Mules furnish the propelling power of all army wagons. The horse is good enough for mounting cavalymen and ranking artillerymen, but when it comes to the important matter of transporting army supplies, there are only two animals in it—the mule and its driver. These are proud days for his muleship. A few days ago, despised and worthless, this hybrid Missouri mocking-bird is now a valuable and much sought after article. Its price has jumped from \$40 to \$100 a head, and army buyers are clamoring for it in large numbers at this figure.

The mule is a necessity as well as a luxury in war times. His advantages over a horse are legion. He is the type of toughness. He will do more work than a horse and live on less. As a pack animal he is far superior. He is like a camel in his ability to go without water. The mule can live on dry leaves or almost any kind of provender and do good work. He will stand any kind or quantity of abuse or hard usage and never murmur. His is the patience of Job. He is somewhat stubborn and hard-headed, but the sense that is literally beaten into him is as useful to his employer as any other sense. He can trot in mud knee-deep all day without weariness, and he is a far better swimmer than the horse. One can ride a well-trained mule into a well or run up a tree. He is the sine qua non for a campaign through the mountains of Cuba. Our troopers tell me that as a war animal the mule has all these advantages and many others.

Said an old veteran to me: "A mule can discover water two miles off. And he will never fail to tell you about it. He will go if necessary for days without water, but he will let you know sure whenever he comes within two miles of it. His voice is not musical; but it is easy to understand. Again, his ears are not big for nothing. He is as watchful as a cat. Any unusual sound will awaken him. He can tell the tread of hostile steps or any movement of the enemy at any hour of the night, and he will never fail to let you know of it.

"As a pack animal, when his back has to be used in lieu of vehicles, the mule is the only animal. He will carry everything you put on him. He will travel with it forever. He will never break down. Wading marshes, swimming rivers, climbing mountains—it is all the same to him. He fattens on hardships.

"Mules are used nearly altogether at army posts. They carry the couriers, pull the ambulances, plow the potato patches. A good mule team will pull the ambulances six miles an hour for twenty-four hours and never give forth a sound of complaint. Any one of them at the end of that journey of 120 miles will promptly elevate to the ceiling any man who will tickle his foot.

"While a mule can even stand cold better than a horse, his powers of endurance find best illustrations in hot climates. He is a product of the South. The climate of Cuba has no terrors whatever for him. He is not as swift as the horse in an artillery charge, but he will pull those engines of

war all day without fatigue. And he will listen to the roar of cannon without batting an ear. His nature is not musical. The sound of battle has neither terror nor charm for him. He stays where you put him, and he raises the white flag never."

June Notes.

Keep the cultivator going.

Cut clover when in fullest bloom.

Plant cucumbers for pickles this month.

It is not too late yet to sow fodder crops.

Better hire extra help than to get behind now.

There is little danger of cultivating a crop too much.

Have everything in the best shape possible for harvest.

Harvesting a crop in good season secures a better quality of product.

Hogs that are fattening should be marketed this month if possible.

While clover needs to be well cured, it may easily be cured too much.

Sell all of the chickens and ducks now as soon as they reach a marketable size.

After strawberries are done fruiting remove the mulch and cultivate thoroughly.

The teams that are kept hard at work and perspire freely need plenty of water.

So far as possible stack the clover hay under shelter. It will keep in a better condition.

Untidy fence-rows and roadsides are a great disfigurement to a farm and should not be allowed.

Let the hogs clean up the waste apples and peaches under the trees and there will be less waste fruit the next year.

Even if on good clover pasturage, fattening hogs should have twice daily all of the good sound corn they will eat.

While the daily growth of hogs increases as the animals mature, cattle make a smaller growth as they become larger.

Good clover hay or a good variety of grass in the pasture will give better results than an exclusive grain diet for any kind of stock.

If wheat is cut at the proper stage not only will the grain be plumper and of a better color but the straw will be more valuable for feed.

So far as can be done clover and timothy hay should be cured and stacked without getting rained upon. A little rain on partially cured hay damages it.

If the clover is to be pastured after the first crop is harvested more feed will be secured if it is allowed to make a good start before turning in the stock.

Now is a good time to breed the sows that it is desired to farrow this fall. By having pigs come early they will get well started to growing before cold weather.

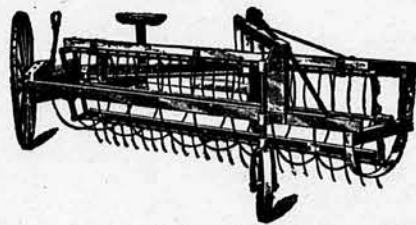
Whether grain is cut with the binder or reaper it is an item to shock well as fast as possible after the binding is done. It is too risky to allow grain to remain on the ground.

Make clean, thorough work of the harvesting. After a crop is grown it is poor economy to waste or damage by carelessness in harvesting or storing away.

Eldon, Mo. N. J. SHEPHERD.

Quick Haying Machine.

We are showing herewith two machines which reduce the labor of haying to the very minimum. They are manufactured by the Keystone Manufacturing Co., of Sterling, Ill., who are well and favorably known to our readers. This Keystone Side Delivery Rake takes up the hay cleanly from the ground and delivers it into a long, continuous, light windrow, ready to be carried up by the loader.



It rakes cleanly but does not rake up the dirt, stubble, manure, etc. It is said to be of easy draft and is well and strongly made of the best material throughout.

The Keystone Hay Loader loads the hay direct from the windrow as it is left by the rake. It dispenses entirely with the services of an extra man, and one man and a team will handle more hay with its aid than three men can handle in the ordinary way. Another leading feature in the use of these machines is the quality of the hay. They work so rapidly that all hay can be taken in when it is at its best. They easily save their price in a season of "catchy" weather, when fast haying is a necessity. Write the Keystone people for circulars, etc., and look into their merits and advantages before the haying season opens.

"Necessity

Knows No Law."

But a law of Nature bows to the necessity of keeping the blood pure so that the entire system shall be strong, healthy and vigorous.

To take Hood's Sarsaparilla, the great blood purifier, is therefore a law of health and it is a necessity in nearly every household. *It never disappoints.*

Tired Feeling— "I had that tired, dull feeling, dyspepsia, headaches and sinking spells, but Hood's Sarsaparilla made me a new man. I never was better than now." JOHN MACK, Oskaloosa, Iowa.

Rosy Cheeks— "I have good health and rosy cheeks, thanks to Hood's Sarsaparilla. It builds me up and saves doctor's bills." MARY A. BURKE, 604 East Clair Street, Indianapolis, Ind.

Hood's Sarsaparilla
Never Disappoints

Hood's Pills cure liver ills; the non-irritating and only cathartic to take with Hood's Sarsaparilla.

Slandering Our Army.

The same gentlemen who have predicted the continuance of the war for centuries to come have also spread abroad many tales to the effect that our officers and men have conducted the fighting against the Philippines in a wanton manner, with needless sacrifices of life and with general disregard of the rules and principles of civilized warfare. We shall consider all this to be baseless slander until some evidence can be brought forward to prove the charges. There have been assertions, furthermore, in various quarters that our soldiers in the Philippines have been suffering needlessly and have been ill provided for. The best evidence obtainable goes to show that no troops at a distance from home and engaged in actual warfare were ever so well supplied with food, medicine, clothing, and hospital care and facilities as our army now in the Philippines. The conditions of campaigning in Luzon subject our men to no little hardship in spite of everything that can possibly be done; and the end of the war will be welcomed by all thoughtful and sensible people with a deep sense of relief and gratitude. But while we have business of that kind on our hands it is not well to exaggerate the dark side of the picture. And it is folly that approaches criminality to plot schemes for hampering our Government in its efforts to end quickly an unhappy business that nobody enjoys.—From "The Progress of the World," in the American Monthly Review of Reviews for June.

Buffalo and Return at One Fare for the Round Trip

via the Nickel Plate Road, June 11, 12 and 13. Tickets good to return to and including July 2, 1899, providing they are deposited with joint agent in Buffalo on or before June 17, 1899. City Ticket Office, 111 Adams St., Chicago. Depot (on the Loop), Van Buren St. and Pacific Ave., near Clark. (9)

Farming in Colorado and New Mexico.

The Denver & Rio Grande railroad, "The Scenic Line of the World," has prepared an illustrated book upon the above subject, which will be sent free to farmers desiring to change their location. This publication gives valuable information in regard to the agricultural, horticultural and live stock interests of this section, and should be in the hands of everyone who desires to become acquainted with the methods of farming by irrigation. Write S. K. Hooper, G. P. & T. A., Denver, Colo.

National Educational Association Meeting.

For the meeting of the National Educational Association at Los Angeles, Cal., July 11-14, 1899, the Union Pacific will make the greatly reduced rate of one fare, plus \$2.00, for the round trip.

The excellent service given by the Union Pacific was commented on by all who had the pleasure of using it to the convention at Washington in 1898. This year our educational friends meet in Los Angeles, and members of the Association and others from points East should by all means take the Union Pacific.

The service of the Union Pacific via Omaha or Kansas City is unexcelled and consists of Palace Sleeping-Cars, Buffet Smoking and Library-Cars, Dining-Cars, meals a-la-carte, Free Reclining-Chair Cars and Ordinary Sleeping-Cars.

The Union Pacific is the Route for summer travel.

THE MAN AND THE ANIMAL IN SURGERY.

Address by Dr. Henry W. Roby, of Topeka, read before the Missouri Institute, Kansas City, April 19, 1899.

"The great physician, skilled our wounds to heal,
Is more than armies to the public weal."

Thus sang the great Homer. I once stood in the clinic in Rush Medical College, and assisted Dr. Moses Gunn in an extensive and bloody dissection of the face and chin of a man for epithelioma. When the lower lip was all cut away and the face loosened from the inferior maxilla ready to be drawn forward and stitched together, and while we were waiting a few moments for the oozing to cease, the gray-haired old surgeon threw his spectacles up over his forehead and turned to the class and said: "Gentleman, I have always thought I would rather be the man than the animal! It is much easier and more agreeable for me to cut this man's face off than it is for him to have it done. But that is his misfortune and not yours or mine." That was his entire lecture to the class on that case. It was clear, forcible, and laconic, and I doubt not was much longer and better remembered by the class than would have been a long and scholarly disquisition on the pathology and prognosis of epithelioma. It demonstrated a strong, dominant characteristic of a great surgeon, for Moses Gunn was a great surgeon, a man of action rather than words.

It so happened that on the same day I attended another clinic by another surgeon, less renowned, to be sure, but one who prided himself on his wide and intimate acquaintance with surgical literature, a man who could quote from memory, almost literally, page after page of Gray's Anatomy, and the works of Billroth, Paget, Holmes, Brodie, Stricker, Harley, and Brown. He could tell us offhand who invented almost every instrument and mode of procedure in surgery. He had at his tongue's end the anecdotes of about all the memorable surgeons of the past. And yet he was a very indifferent operator. He never seemed to know at sight just what he wanted to do, nor just how it should be done in the case in hand.

It also happened that on the day I speak of, he, too, had a case of epithelioma of the lower lip, much like Prof. Gunn's case, but it took him twice as long to make the dissection, and, for lack of a good geometrical eye, the flaps could not be brought into a good symmetrical coaptation, and when the sutures were placed, there was such a pucker, one of the students indulged in this bit of levity: "It looks like the mouth of a sucker trying to spit sideways." The lecture was flooded with literary gems, but contained not one terse, magnetic aphorism, and I doubt if any of us went away bearing in mind a single sentence of the long and brilliant lecture. I am unable to recall a word he said. All I remember is that there was an indifferent operation and a flash of literary lightning in the amphitheater. But no bolt crashed into the brain of any listener. Moses Gunn had the genius necessary to a good surgeon. The other man had more learning, but less practicability.

Neither Washington nor Lincoln ever attended a college or university, but they were both endowed with incommensurate practicability. Both knew by intuition exactly what to do and precisely the right time to do it. So it is with some surgeons; with less erudition, but more innate genius, they tower above their bookish competitors, while the latter feign astonishment at their ascendancy.

Let me give you a brief survey of the qualifications that seem to be requisite to eminent success in surgery.

The man must be a good animal: that is, he must be vigorous, healthy, magnetic, and what the politicians call a good mixer, an all-around man. He must be sympathetic and quick of apprehension. He must be vigorous and strong enough in mind and body for weaker people to lean on with confidence that if any mortal can save them he can. A hopeful, cheerful demeanor is of the utmost importance to any man charged with the duty of standing in the battle's front between life and death, and so

"The surgeon, most, should cultivate a cheerful mind,
For when he rides, black care sits close behind."

And, when arrived, that none should know remorse,
That imp should stand outside and hold his horse."

And when the afflicted decide to look to him for help, he must have adequate knowledge of the powers and resources of his art. He must have wisdom, which is above knowledge; and he must have practicability—that tact and genius that can quickly discern the best thing to be done, and the best way of doing it. He must have good judgment, which comes from knowledge, wisdom, and tact combined. And with all, he must of necessity be a

first-class mechanic, such a one as might easily, with due training, become a master mechanic in a great factory or extensive shops. He must have an inventive faculty to enable him to readily adapt known means to necessary ends, and, where the best means are not at command, to improvise new means and quickly apply them. He must be quick-witted, ready and cool in emergencies, and must never be heard to say, "If I had a Raugour forceps, or a Pean's hamostat, or a Levis splint, or an Esmark's bandage, I could save this patient, but without it I am helpless." He must be able to overcome the want of any of these by other means that he can command. When the great Pare ran out of boiling oil for stopping hemorrhage on the battle-field at Piedmont, he bethought him to tie the arteries with a thread, and the whole surgical world is still using his quick-witted makeshift. If the best can not be had in the nick of time, the best available must, by extra skill, be made to serve the purpose of the best and serve it well. The fact is that a great surgeon will do the thing to be done and do it well, whether he has a cutler's shop spread out before him or not. Emerson tells us that "The simplification of knowledge is the last act of wisdom." And I say to you that to do a great surgical operation promptly and well with the implements you can carry in one small pocket, is a better proof of one's skill, than a filled requisition on the instrument-maker's whole armamentarium. The latter is a burden of riches, unless one knows how to use them. Place before a hundred men and women all the pigments in nature and all the brushes in the market, and the Titian, the Raphael, the Michael Angelo, the Moran, the Bierstat, and the Rosa Bonheur among them will give us the immortal portraits and landscapes and the animated natures with a few inspired touches, and a few pigments mixed with brains, while the multitude of them will give you daubs or nothings.

From the ancient days—

When Phidias wrought and Praxitiles
Carved beauty out of the rocks and trees,
down to the time of Thorwaldsen, Flaxman, and Powers, the few great geniuses among men with mallet and chisel knock lightly at the doors of marble halls and out walk the Olympian gods, the Venus de Milos, the Cupids, the Psyche, the Murcurs, the Three Graces, and the Greek slaves, while the balance of mankind might hammer the same blocks of marble to dust and flinders without calling forth a single line of beauty, albeit, some by dint of great labor might hew out a horse-block or a hitching-post. Genius is inherent in the man, and no amount of cultivation can make him great or creative unless that divine spark fall among his endowments. Give us genius! genius! genius! is the cry of the world. But when God giveth genius there is somewhat still to be done. That divine gift must be cultivated. It must be wedded to industry. It must struggle, and strain, and tug at the laws of the universe and overflow its channel like the rivers that break the chains of gravity in flood times. Continued assaults on the walls of darkness will at last breach them and let in the light. Persevering genius will give us a Homer, a Milton, a Shakespeare, an Emerson, in literature; a Cromwell, a Washington, a Lincoln, a Gladstone, in statesmanship; a Columbus, a Drake, a Cook, in navigation; a Hannibal, an Alexander, a Napoleon, and a Grant, in war; a Wm. Penn, a Roger Williams, and a Wilberforce, in peace and justice; a Watt, a Stephenson, a Howe, a Bell, an Edison, and a Tesla, in invention. That same divine spark highly cultivated and hard pressed in the service of mankind has given the world its great surgeons; its Democritus, Hippocrates, Herophilus (the Egyptian), Proxagoras, Celsus, Hallyabbas (the Persian), Avenzoar (the Jew) and Velpeux, whom the French delight to call "The King of Surgeons." And we may add to the list a great line of more modern men all over the world. In America, there are so many kings of surgery that it is hard to place the crown on any head and keep it there. If you should incline to place it on the brow of Pancoast, or Gross, or Agnew, or Simpson, or Hamilton, or Senn, I may incline to snatch it off and place it on our own Hel-muth. We should not go far amiss should we place gleaming crowns on many heads. And if we place many surgical crowns on many heads, what shall we not do for the animals, the men and women, who, by their combined affliction and heroism, have made it possible for these kings to win their crowns? Without opportunity, none of us would ever win a surgical crown or surgical renown. The afflicted animals must needs have great faith in us to furnish us the opportunity to win fame and the undying gratitude of humanity. We climb the rugged steep of reputation over the heads of our prostrate fellow mortals. Did you ever think of that? Conceive if you

can the great mountain of tortured, broken, crushed, and ghastly human beings over whose weltering forms we have climbed to that pinnacle of fame we now occupy as a profession.

The history of the world is written in blood. Every military and naval establishment is a menace to life and limb. Frowning forts and snarling guns crown the strategic hilltops of all countries and their combined navies darken the blue seas. The engines of lawful and unlawful murder clank and rattle in all the highways of the world, and millions of armed men confront other millions in armor. And the surgeon is found with them all.

Through all the historic years of the race, redactors have busied themselves with collecting and publishing the names and deeds of men engaged in maiming and destroying their fellow men. With the names of all great leaders are coupled the lists of the slain and wounded in bloody combats as a thing of renown.

Let your gaze turn back through twenty centuries and mark the paths and rivers of blood that have reddened the face of the planet. Men have been led to battle ever since there were men enough to lead. Nineteen hundred years before Christ, not tribes only, but kingdoms were warring with kingdoms.

Joshua, Cyrus, Darius, Hannibal, Caesar, Mohammed, Zingis, Cortes, Frederick, Napoleon, Wellington, Grant, Lee, Nelson, Farragut, and Dewey, are conspicuous as life-destroyers. And if we consider that four men at least are wounded to every one killed in battle, we shall find an appalling array of subjects for the surgeon's skill—the animals I am talking about. Aside from battle and purposed slaughter, probably an equal or greater number of people are maimed and crippled by the accidents of the chase, of commerce, of manufacture, and the daily affairs of life and labor. And we may add to these an appalling list of injuries inflicted by criminals in the pursuit of their foul avocations—and all of them needing the surgeon. And while all the warriors of the world are chiefly concerned in killing and wounding their fellow men, we are solely concerned in the great work of saving them. When their battle begins, ours begins also; and it lasts much longer than theirs. Napoleon said God was always on the side of the heaviest guns and the strongest battalions, but we, unlike his God, are always found on both sides of every bloody conflict, no matter how heavy the guns or strong the battalions. Leaders and columns march on and leave us to save the shattered remnants of friends and foes. Listen, and you shall hear the thrilling call:

"Forward, the Light Brigade!
Was there a man dismayed?
Not though the soldiers knew
Some one had blundered.
Their not to make reply,
Their not to reason why,
Their but to do and die.
Into the valley of death
Rode the Six Hundred."

"Cannon to right of them,
Cannon to left of them,
Cannon in front of them,
Volleyed and thundered.
Stormed at with shot and shell,
Boldly they rode and well,
Into the jaws of Death,
Into the mouth of hell,
Rode the Six Hundred."

That scene at Balaklava has been enacted over and over again in the world's history. But the story is only half told by the great poet. Listen again, and you shall hear the equally imperious call for the next scene in the great tragedy:

Forward, the Surgeons' Corps;
Up where the cannons roar,
Up where red torrents pour,
Through battle-born whirlwind
And the musketry's rattle;
Up where the sabres shine,
Up to the fighting line,
Over the bursting mine,
Mars wins his wager,
And now its your battle.
Hark! How the trumpets blare!
Death is before you there
Clutching the brave and fair,
While the red surges
Are sweeping them under.
Onward, ye brave and true,
There are great deeds to do,
Death flings his glove to you,
While on the red hilltops
His dread engines thunder.
Forward, to left and right,
Into the thickest fight,
Charge with immortal might;
Torn men are falling there
Thicker and faster.
Now let your weapons gleam,
No time for idle dream,
Black flags are floating there
Men wounded everywhere,
Armies are going down,
Hope flings away her crown,
Now win your victory,
O'er death and disaster!
What, with your vict'ry won!
What, with your labors done!
How shall the record run?
Piaudits and laurels,
And over your valor
The populace raving?
No great coliseum,
No grand mausoleum,
No mighty Te Deum
For you or your triumphs,
Men win more honor
In slaying than saving.



A vivacious woman's fan can frequently speak in more eloquent language than any known to the tongue of man. It can invite or repel, sigh or smile, be meek or haughty, tear a passion to tatters or humbly seek forgiveness.

It can also tell the story of health. A woman who suffers from weakness and disease in a womanly way sits in sorrow and dejection while her healthy sisters enjoy themselves. She may be naturally beautiful, naturally attractive, naturally interesting and animated and witty, but the demon of ill-health is gnawing at the very vitals of her womanly nature, and she soon becomes a withered wall flower in comparison with her brighter and more healthy sisters. Dr. Pierce's Favorite Prescription is a wonderful medicine for women who suffer in this way. It acts directly on the delicate and important organs concerned in wifehood and motherhood. It tones and builds up the shattered nerves. It restores the glow of health to the pallid cheek. It gives springiness and trip to the carriage. It makes the eyes sparkle with returning vivacity. It imparts animation to the mien and gestures. The fan that long lay listless and idle in the lap of an invalid again speaks the eloquent language of a healthy, happy woman. Thousands of women have testified to the marvelous merits of this wonderful medicine.

"For several years I suffered with prolapsus of the uterus," writes Miss A. Lee Schuster, of Box 12, Rodney, Jefferson Co., Miss. "Our family physician treated me for kidney trouble, and everything else but the right thing. I grew worse and worse. My body was emaciated, hands and feet clammy and cold, stomach weak, with great palpitation of the heart. I would suffer with nausea all night. I began taking your 'Favorite Prescription' and I began to improve right away. I have taken three bottles and now I am very nearly well and am very happy and thankful to you."

Keep your head up and your bowels open. The "Golden Medical Discovery" will put steel in your backbone, and Dr. Pierce's Pleasant Pellets will cure constipation.

Weather Report for May, 1899.

Prepared by Chancellor F. H. Snow, of the University of Kansas, from observations taken at Lawrence:

The mean temperature of the past month was nearly $2\frac{1}{2}^{\circ}$ above the average for the thirty-one preceding Mays on our records. In other respects the month did not vary notably from the average May. The total rainfall was a trifle above the average amount, and the mean cloudiness was somewhat greater than usual. The relative humidity was several per cent above the mean; the run of wind and the mean barometer were normal.

Mean temperature was 67.25° , which is 2.37° above the May average. The highest temperature was 87° , reached on the 15th; the lowest was 42° on the 18th, giving a range of 45° . Mean temperature at 7 a. m., 62.40° ; at 2 p. m., 75.35° ; at 9 p. m., 65.63° .

Rainfall was 4.79 inches, which is 0.16 inch above the May average. Rain in measurable quantities fell on thirteen days. The entire rainfall for the five months of 1899 now completed is 11.22 inches, which is 1.69 inch below the average for the same months in the thirty-one years preceding. There were eight thunder-storms during the month.

Mean cloudiness was 49.31 per cent of the sky, the month being 2.49 per cent cloudier than usual. Number of clear days (less than one-third cloudy), 10; half-clear (one to two-thirds cloudy) 12; cloudy (more than two-thirds), 9. There was no day entirely clear, and none entirely cloudy. Mean cloudiness at 7 a. m., 56 per cent; at 2 p. m., 46.13 per cent; at 9 p. m., 45.80 per cent.

Wind was north 1 time; northeast 14 times; east 16 times; southeast 14 times; south 26 times; southwest 9 times; west 3 times; northwest 10 times. The total run of the wind was 11,638 miles, which is 35 miles below the May average. This gives a mean daily velocity of 375.42 miles and a mean hourly velocity of 15.64 miles. The highest velocity was 40 miles an hour, at five times during the month.

Barometer.—Mean for the month 29.020 inches; at 7 a. m., 29.035 inches; at 2 p. m., 29.016 inches; at 9 p. m., 29.009 inches; maximum, 29.366 inches at 7 a. m. on the 13th; minimum, 28.699 inches at 9 p. m. on the 1st; monthly range, 0.667 inch.

Relative Humidity.—Mean for the month, 77.66 per cent; at 7 a. m., 90.26; at 2 p. m., 64.80; at 9 p. m., 77.93; greatest, 100, at 9 p. m. on the 31st; least, 43, at 2 p. m., on the 18th and the 21st. There were no fogs during the month.

Inventors requiring money to develop or perfect inventions, patents or ideas of value should communicate with R. G. Ruxton, 195 La Salle St., Chicago, Ill.

WEEKLY WEATHER-CROP BULLETIN.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending June 5, 1899, prepared by T. B. Jennings, Section Director:

GENERAL CONDITIONS.

A warm week, the temperature ranging from 3° to 7° above the normal. Good rains fell throughout the middle and eastern divisions, and in Graham, Trego, and the southeastern counties of the western, the rainfall generally being above the normal. Hail-storms occurred in Graham, Trego, Russell, Nemaha, and Bourbon.

RESULTS.

EASTERN DIVISION.

Wheat is heading in the northern counties, has improved in Chase and Chautauqua, is filling better than last year in Shawnee, but is not doing so well in Franklin and Leavenworth. Corn-planting not finished yet in Bourbon, Cherokee, and Labette, owing to protracted wet weather; in Bourbon it is quite weedy from the same cause. Oats are heading in the northern counties. Flax and oats are getting weedy in Jackson, Miami, and Morris. Alfalfa-haying was interfered with by the rains. Hail damaged crops in Bourbon and Nemaha. Potatoes are beginning to bloom. Allen County.—A fine growing week, but too wet to work.

Atchison.—Fine growing week; flax and oats, generally, not showing good stand and getting weedy; early oats heading; chinch-bugs numerous; early cherries ripening; grass doing well.

Bourbon.—Wet week, with severe hail-storms; corn a fair stand but weedy; corn-planting not finished; corn clean in north part; wheat not improved; chinch-bugs numerous.

Brown.—Corn growing nicely; pastures fine.

Chase.—Corn the finest for years, being cultivated second time; wheat improved by the rains; potatoes good; apples promise full crop; cherries a half crop; grapes very fine; currants good; alfalfa hay injured by rain.

Chautauqua.—Wheat improved; corn being worked; cloudiness retards alfalfa-haying.

Cherokee.—Too wet to work; oats look well; corn small, and not all planted.

Woodson.—Corn doing well, though small for time of year; some bugs in corn. Wyandotte.—Wheat headed; potatoes beginning to bloom; a bad week for alfalfa and clover-haying.

MIDDLE DIVISION.

Wheat, generally, has improved except in Barber, Butler, and Edwards; in Cloud and Saline it has improved in some sections and deteriorated in others. Oats have improved except in Edwards, Jewell, Ottawa, and Stafford. Corn is generally in good condition and clean. The first crop of alfalfa is being secured in good condition.

Barber.—No improvement in wheat; rye looking well; corn doing well, some replanting; cane and Kaffir growing; cherries dropping; grapes scarce, many varieties being winter-killed; fair crops of apples, peaches, plums, and apricots; potatoes in bloom and doing well; vegetables plentiful; cattle doing well.

Barton.—Wheat improving slowly; potatoes blooming; first alfalfa crop being put up.

Butler.—Corn, washed out last week, nearly all replanted; oats and wheat looking very poor.

Cloud.—Corn, good stand, clean and growing rapidly; wheat improving in some sections, losing ground in others; thin wheat and oats getting weedy; alfalfa, a good crop, ready to cut; strawberries a good crop.

Cowley.—Too wet for wheat and corn, sunshine needed.

Dickinson.—Wheat and oats heading, improving every day; chinch-bugs doing some damage; corn a good stand and looking well; Kaffir doing finely; potatoes in bloom.

Edwards.—Corn clean and in good growing condition; fine rains all over the county, reviving vegetation; everything looks better but too late to save the wheat.

Harper.—Crops in fine condition; fruit promises large yield; oats fine; pastures very good; weeds taking some wheat-fields.

Harvey.—Crops fair; last week's hail-storm damaged crops in northeast part of county; chinch-bugs bad in wheat.

Kingman.—Wheat and oats well headed; corn growing rapidly, cultivation well begun but stopped by the rains.

Jewell.—Corn growing nicely and generally clean; alfalfa in bloom; oats only fair; potatoes doing well.

McPherson.—Corn growing well and being worked; weeds growing rapidly and taking fields of thin wheat; wheat killed in northeast part of county being plowed under; but the corn is reviving.

Finney.—First alfalfa crop light; oats and barley practically burned out; fruit light; good rains on 1st and 2d and conditions favorable for more.

Ford.—These rains will bring out all forage crops; prairie grass very short; much alfalfa cut and injured by the rain; the first crop of alfalfa is light.

Gray.—Alfalfa-cutting begun, very short; cherries turning, will soon be ripe; wind blew much fruit off the trees; good rain on the 2d.

Hamilton.—No rain; condition of crops very bad; grass drying up.

Kearny.—First crop of alfalfa being cut, very light, that irrigated last fall is making from half to two-thirds of a crop; much grain in the ground not yet sprouted, waiting for rain; pasture drying up.

Logan.—Crops damaged much; no prospect of over half a crop, need rain to get that; pasture good.

Morton.—A rainless week and hot sunshine telling on pastures; Russian mulberries beginning to ripen; cherries turning; need rain.

Ness.—Light local rains; small grain heading but very short; grass poorer than for years at this season; wheat will hardly pay for the cutting; rye not much better; oats and barley more promising; gardens backward; potatoes look fine.

Rawlins.—Dry; everything growing slowly; all grain cut short one-half; grass-hoppers numerous in places.

Scott.—Crops of all kinds not growing; early grain nearly ready to head but very short; forage crops will be cut short if drought continues.

Sherman.—Local showers; spring wheat looking well; grass fine; corn doing well.

Thomas.—Barley and corn looking well; high winds have hurt wheat; some wheat heading six inches high; good week for cleaning corn; rain needed.

Trego.—Several fair rains; wheat and barley revived; pastures improved; some hail; most of the crops much better for the rains.

Wallace.—Dry, windy week; corn doing fairly well; wheat and barley need rain; range grass very good; prospects for apples, cherries, and plums good.

Gossip About Stock.

Steele Bros., Belvoir, Kans., breeders of Herefords, who recently placed a breeders' card in the Farmer, write that the demand for bulls is good and that they have sold ten head since they started to advertise.

Sunny Side herd of Poland-Chinas, owned by Dr. M. L. Somers, Altoona, Kans., now has for sale a few last fall and winter gilts. The spring crop of pigs is the most thrifty ever raised on this farm and will be ready for this fall's trade.

J. M. Anderson, Salina, Kans., breeder of Shorthorn cattle, also a member of the Kansas Improved Stock Breeders' Association, who has been using Grand Duke 121982 at the head of his herd for some time, now offers him for sale. See "Special Want Column" advertisement.

D. Trott, Abilene, writes: "I have had very good luck with spring pigs so far this season. I expect to be able to suit customers with a lot of good ones in season. Have several fine Poland-China and Duroc-Jersey boars ready for service, and several nice sows that will be sold worth the money. Stock healthy and doing well."

Our advertiser, the Crescent Mfg. Co., of Philadelphia, have received the following letter, showing the merits of "Tough on Flies." It is from McClelland Swartz, Spring Grove Dairy, Pennsylvania, and reads as follows: "Gentlemen:—I tried your 'Tough on Flies' last year and found it to pay. You will find enclosed postoffice order for \$1.50. Please send me one gallon 'Tough on Flies.'"

The largest shipments of hogs ever made from Sterling, Kans., according to the Bulletin, have been in the past two weeks. Saxton & Osthoff were the consignors, and during each of those weeks, five cars of 430 hogs were loaded and sent to Kansas City. Two thousand seven hundred and fifty dollars was paid for the first lot. They were purchased from farmers living in the Sterling district. This is a pointer showing the capacity and value of this country for farming and raising stock.

M. F. Tatman, Rossville, Kans., owner of Kaw Valley herd, reports many good litters of Poland-Chinas, one by the sweepstakes-winner, Perfect I Know, of eight pigs, six males and two females, farrowed February 28, 1899. Their dam, Only Me, was sired by old Look Me Over, and good judges, among them Winn & Son, owners of Perfect I Know, say she is the best sow they ever saw, sired by this noted boar. Only Me's litter is as even as a flock of quails and look like they were all going to be herd-heads.

Last week the Missouri State Board of Agriculture made a tour of the State with a view to selecting a site for the Missouri State Fair, organized at the recent session of the legislature. A prominent feature of their visit to Chillicothe was an hour spent at Weavergrace, viewing the Hereford cattle of Mr. T. F. B. Sotham. The C. M. & St. P. R. R. placed a special train at the disposal of the Chillicothe State Fair committee, and the eighteen members of the board of agriculture, with about three hundred citizens of Chillicothe and delegates from prominent towns of northwest Missouri, who are interested in seeing that Chillicothe gets the fair, took train to Weavergrace. All were unanimous in praise of the Weavergrace breeding establishment and the celebrated cattle

Horse Owners! Use

GOMBAULT'S

Caustic Balsam

A Safe Speedy and Positive Cure
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.
THE LAWRENCE-WILLIAMS CO., Cleveland O.

maintained there. Returning to the city, a reception was held in the evening in honor of the State Board of Agriculture. Ex-Governor Colman, of St. Louis, who was the first secretary to preside over the Department of Agriculture at Washington, took occasion to say that the State board felt amply repaid for their visit to Chillicothe in the treat afforded at Weavergrace. Governor Colman said: "I have visited nearly all the great herds of America, and many of the more prominent ones in Europe, particularly those of England, and I do not hesitate to say that I never in my life saw on one farm such an exhibit of high-class cattle as Mr. Sotham has shown us to-day. I do not hesitate to express my opinion that it is the greatest herd of cattle in America or in the world."

Sayles & Son, Norcat, Kans., owners of the High Grove herd of Corwin-Tecumseh Poland-Chinas, write: "We have just received a Chief Tecumseh 2d boar out of a sow by Hands Off, dam, the great Anderson's Model; also a Chief Perfection 2d fall boar out of the grand brood sow, Good Look, by old Look Me Over. They are the finest pair we ever bought, and were bred by H. O. Minnis, Edinburg, Ill. Last fall we bought a son of Chief T. 3d, the Omaha prize-winner; also two others equally well bred. We will be pleased to show the five finest herd boars and sixty brood sows in Kansas."

"Don't you think I write with a great deal of dash?" inquired the new woman reporter. "Yes," responded the city editor, "and I'd much prefer to have you use commas and semicolons."—Cleveland Plain Dealer.

"Do you know, there's something about that friend of yours that I like," said the fellow who never refused a treat. "Yes; I guess it's his money," replied the friend, whose eyes were wide open.—Yonkers Statesman.

Teacher—"The sentence, 'My father had money,' is in the past tense. Now, Mary, what tense would you be speaking in if you said, 'My father has money?'" Little Mary—"Oh, that would be pretense."—Philadelphia Record.

ARE YOU GOING TO
Chicago or the East?

THE THROUGH EXPRESS FROM
Colorado—Kansas—Nebraska
VIA OMAHA,



AND THE

Chicago Express from Kansas City

In addition to Pullman Sleepers, Free Chair Cars, and the Best Dining Car Service in the World, are equipped with

Buffet Library Smoking Cars
furnished in club style and supplied with latest periodicals, illustrated papers and a select library of recent fiction.

ARE YOU GOING TO
Colorado or the West?

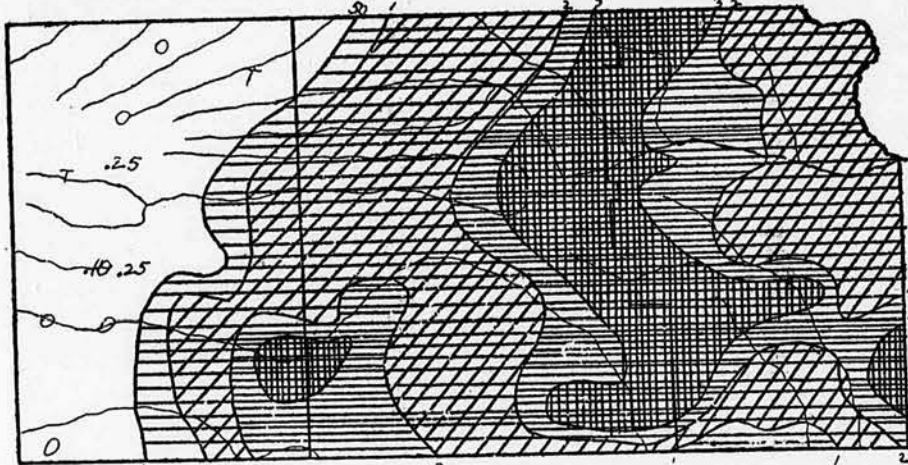
TRY THE COLORADO FLYER

Fast, carries Dining Cars and Pullman Sleepers. Leave Omaha, 6:40 p. m.; Kansas City, 6:30 p. m.; St. Joseph, 4:50 p. m. Arrive Denver and Colorado Springs, next morning.

JNO. SEBASTION, E. W. THOMPSON,
G. P. & T. A., A. G. P. & T. A.,
Chicago, Ill. Topeka, Kans.

ON AGAIN—APRIL 30TH.

THE "KATY" FLYER.



ACTUAL RAINFALL FOR WEEK ENDING JUNE 3, 1899.

Coffey.—Corn generally clean and growing finely.

Doniphan.—Corn a fair stand but very backward; oats look fine.

Elk.—Too wet to cultivate, need sunshine badly.

Franklin.—First of week hard on corn and flax; since rains corn growing finely; wheat poor, on account of bugs, the fly, and unfavorable weather at times; flax improving.

Jackson.—Wheat heading very short, some wheat yellow from too much water; corn doing well, being cultivated, most fields clean, some drowned out; oats not doing well.

Jefferson.—Wheat doing well but full of bugs; crops doing well; too wet to cultivate.

Johnson.—Everything growing and in fine condition.

Labette.—A growing week; corn-planting and cultivation progressing; much Kaffir corn being planted and cane sown; some bottom land wheat fine, some upland wheat improving; oats doing well; some corn still weedy; apples falling badly; potatoes all vines; strawberries about gone.

Leavenworth.—Wheat promises little; corn being cultivated; gardens looking well; early potatoes fine; pastures good; Kaffir-corn planting.

Marshall.—Corn all cultivated once; wheat heading; alfalfa-haying begun, will be a large crop; grass fine; corn-fields in north part badly washed.

Miami.—Corn a good stand and being cultivated; oats poor.

Montgomery.—Much early corn very grassy and a poor stand, late planting coming up well; oats heading; still planting Kaffir and other forage crops; young bugs hatching in the wheat.

Morris.—New potatoes in market; cherries beginning to ripen; wheat heading; oats short and yellow; very poor week for alfalfa-haying; corn and flax doing well; large acreage of forage crops being sown.

Nemaha.—Corn a good stand, being cultivated; oats and potatoes fine; fruit injured some by winds; hail destroyed fruit and injured crops in northwest part.

Osage.—Corn growing rapidly; pastures fine; early cherries turning; strawberries a good crop; potatoes growing well.

Pottawatomie.—Corn doing well; weather bad for alfalfa-haying.

Riley.—Temperature 7° above normal; rainfall 1.60 above normal.

Shawnee.—Wheat is filling better than last year; corn growing rapidly and looking well.

Wabaunsee.—Corn a good stand; Kaffir-corn and sorghum being put in; alfalfa-cutting just beginning.

Wilson.—Corn-fields generally clean; everything growing rapidly; some bugs on upland wheat.

Marion.—Wheat improving, not so badly damaged by hail as reported, will be half a crop; corn doing finely; grass in fine condition.

Mitchell.—Everything in good condition, a fine growing week.

Ottawa.—A good week for alfalfa-cutting; corn growing slowly; late rains will make early potatoes; apples good; cherries falling; pastures good; cattle doing well; oats prospect not very good.

Pawnee.—Extreme drought and winds have nearly killed vegetation, but these good rains will soon revive pastures; grass-hoppers in abundance.

Pratt.—Corn and Kaffir good stands, clean, and in fine condition; wheat, barley, and oats will now make part of a crop.

Phillips.—All crops doing nicely.

Reno.—Wheat looking well, except a few poor fields; oats fair, heading short; corn in fine condition, unusually good stand and clean; prairie grass growing well; alfalfa being cut, fair crop; strawberries plenty; early cherries ripe and on market; apple prospect fair, though many have dropped.

Republic.—Wheat heading; corn doing well; the rain will help everything.

Rush.—Wheat heading, and will now fill and from a third to a half crop will be harvested; corn looking well, with a larger acreage than usual; potatoes promise a large crop.

Russell.—Crops look more promising but more rain is needed; corn looking fairly well; wheat heading short.

Saline.—Wet weather interfering with alfalfa-cutting, but most of it is cut; fields of thin wheat taken by weeds, the other wheat has improved; May wheat beginning to turn; corn in fine growing condition.

Sedgewick.—Too much water; grass growing rapidly; corn generally in good condition; oats and wheat mostly headed, and plenty of moisture to fill.

Stafford.—Week ended with heavy rain, which will improve growing crops; wheat, oats, and barley almost too far gone to be helped by the rain; early corn clean.

Sumner.—Oats and wheat headed in good condition; wheat rusting some; cherries ripening.

Washington.—Corn being cultivated; grass and small grain doing finely; alfalfa beginning to bloom.

WESTERN DIVISION.

Alfalfa is beginning to bloom in the northern counties, and is being cut in the southern, where it is a light crop. The rains caught some of it on the ground in Ford, Wheat, oats, rye, and barley generally heading short. Corn is doing better in the northern than in the southern counties. Much seed lies dormant in the ground in Kearny waiting for rain.

Decatur.—Nothing injured, but beginning to need rain; all crops doing well yet.

The Home Circle.

A FEAST OF LIGHTS.

From out the country places cool and clear
We flash into the maze of city streets.
What pageant this that straightway doth
appear?
What land of faery that our vision
greet?

A feast of lights! And as we roll along,
As if each one some lovely dancer held,
They interweave as to some choric song
Which from the dark mysteriously
welled:

To whose soft tune the dancers round and
round
Move in a rapture tremulous and intense,
With languorous paces that make faintest
sound
And ever duller and more drowsy sense.

The dancing lights! Too lingeringly I
gazed
On their warm motions till, as one who
reels
When by some beauteous, blinding vision
dazed,
And then, back to himself returning,
feels

Right glad of heart; so, then, it was with
me
As, looking up, I saw the heaven's calm
Shedding the light of stars so silently
That on my heart that stillness fell like
balm.

Far off, and cool, each, in his perfect
sphere
Held, as if motionless, his awful way;
Star unto star discoursing crystal clear
As when they sang creation's primal lay.

Ah me! I would that when the dancing
lights
Of wayward passion seek my soul to
sway
With their wild motion, from those meaner
sights
I might be strong to turn my eyes away

To where th' eternal stars so purely
shine—
Truth, Beauty, Good—and by that vision
blest—
Lifting my heart to make its clearness
mine,

Taste then, earth-bound, the everlasting
rest.
—John Chadwick White, in Harper's Maga-
zine.

EUROPEAN GOSSIP.

At the principal Protestant courts of Europe the custom of making Easter the occasion for great civic, political and ceremonial amenities has fallen into disuse, and, save at the court of Berlin, the day differs but little from ordinary Sundays. At Berlin, however, Easter day is inaugurated by the trumpeters of the Gardes du Corps Regiment, who, with their great silver clarions, herald the advent of this great festival of the church by means of Luther's grand Easter chorale. They take their place for the occasion on the tower of the imperial palace at Berlin, and the clear metallic notes of their trumpets resound far beyond the precincts of the royal abode.

On this day the Emperor and Empress attend divine service at the cathedral, and at its close the Kaiser, as on New Year's day, walks, accompanied by all the princes of his house and the chief dignitaries of the army, to the main guard, in order to give the watchword for the day.

Full dress uniform is "de rigueur," not only for every officer, but likewise for every soldier who shows himself in public on this day, and, with the exception of New Year's day and the Emperor's birthday, Easter is celebrated as one of the chief festivals of the year. In the afternoon Easter eggs are hidden for the royal children and their friends to seek, the Easter egg institution being one of the Roman Catholic usages that has been retained by the Lutherans.

For some reason or other, Easter eggs are supposed to symbolize the resurrection, and at the courts of Madrid, of Austria and of Munich, painted and gilded eggs are offered to the sovereign at the close of the Easter high mass, and then distributed by the monarch among the members of the royal entourage who may happen to be present. At the courts of Italy, Austria, Madrid, Lisbon and Munich Easter day is invariably made the occasion both of a state banquet and of a military display. But it is at the courts of Russia, Roumania, Serbia, Greece, Bulgaria and Montenegro that the feast is observed with the greatest degree of pomp, receptions being held by the sovereigns of the diplomatic corps and of the principal dignitaries of state, it being obligatory upon the monarch to kiss each of the men present, and on his consort to kiss each of the women, exclaiming "Christ is risen." It was at one of these Easter receptions that Queen Nathalie of Serbia created such a sensation by refusing to accord the customary Easter kiss to the wife of the Greek envoy accredited to the court of Belgrade, declaring in tones that were audible to all present that she could not possibly bring herself to kiss a woman who was nothing more nor less than her husband's sultana. This was indeed the beginning of that domestic imbroglio which culminated in the divorce of King Milan and Queen Nathalie. At the court of Russia the Easter eggs

are of extraordinary magnificence, those presented by the members of the reigning family to the dignitaries of their court being often studded with jewels of the most costly description.

Until 1870 Easter was celebrated in the most impressive manner at the court of the Vatican. Shortly after midnight the entire square in front of St. Peter's would be thronged by people of every class of society, from the grandest patricians down to the humblest contadini, or peasants. The greater part of the papal army, all its members arrayed in full dress uniform, were drawn up in the center of the square and along the colonnade on either side, and then every one would patiently wait till daybreak. Just before the sun appeared on the horizon a deep and solemn silence would settle over the immense assembly, and then the Pope, followed by a great retinue of gorgeously attired prelates, would appear in the Loggia, or open gallery, above the huge gates of the cathedral. Then, stretching forth his hands in a sweeping gesture the pontiff, crowned for the occasion with his jeweled tiara, would, as the sun rose, pronounce in a loud and resonant tone of voice the blessing, "Benedicat vos," and a moment later the cannons of the Castle of St. Angelo would boom forth the Easter morn salute, while the various military bands in the square would strike up Te Deum, the music being almost drowned by the acclamations of the crowd. This impressive ceremony has been abandoned ever since the establishment of the capital of the Kingdom of Italy at Rome. Both the late and the present King of Italy have repeatedly endeavored to persuade the Court of the Vatican to revive the old-time ceremony, offering to the Pontiff guards of honor and all the other manifestations of respect due to a full-fledged sovereign. But the papal court has never seen its way to comply with the request of the Italian monarch in the matter, realizing that the appearance of his Holiness in the Loggia in full view of the public assembled in St. Peter's Square would destroy the fiction of his alleged imprisonment.

Good Cooking and Morals.

When the introduction of cooking into the public school system was first suggested, one of its most earnest advocates argued that it was a step taken in the interest of temperance and morality as well as of education. She said—for it was a woman who recognized that side of it—that among a certain class of people there was a lamentable ignorance regarding the very simplest rules for preparing nutritious, well-cooked food, and that it was in this very class that intemperance existed to such an alarming degree. And this is natural. When a man does not get the stimulating nourishment which his nature craves he resorts to liquor to supply the want. With this fact staring one in the face, is it not wise to teach that unflinching good food, with all the elements that stimulate and nourish the body and the brain, has its moral as well as its physical benefits?

There are cases on record, as a proof of what this public school has done, where the domestic sky has been perfectly cleared of clouds simply because good food was offered where before it had been badly cooked and consequently did not properly nourish. In one home the substitution of a well-cooked cup of cocoa for the sloppy, herby tea that had become a component part of every morning meal, and a nice Indian cake or plate of muffins for the dry baker's loaf, began a work of reform. The father was proud of the daughter's skill as a cook; the mother, who had grown careless and shiftless and indifferent, was shamed by it. The consequence was better provision on the part of one and more care in preparation on the part of the other. The mother was by no means above turning to account some of the practical knowledge the daughter had acquired under such competent training, and she began also to brush up her own knowledge that she had carelessly allowed to fall into disuse. The result is a happy home, a united family, a cheerful, contented, busy wife, and a man who puts into the family larder what formerly went to the saloon.

You see what it was—just the case of a man going to the bad simply from an unsatisfied appetite, and a discouraged wife who didn't understand what was the matter.

So you see the question of good cooking does involve good morals as well as comfort, and health as well as both.—Sallie Joy White, in Woman's Home Companion.

A Knitted Bath Towel.

This is a newly devised and very useful article, whose manner of making is thus described in the Household Companion:

For a large towel four balls of No. 6 unbleached knitting cotton will be needed. The small size of white bone needles should be used. Cast on 138 stitches. From beginning to end knit plain the first three

GOLD DUST

THE BEST Washing Powder

and last three of every needle, so as to make a selvage. Knit the ends in any way that may be fancied. For instance, seven rows of plain knitting and seven rows of holes.

To make the holes knit two stitches together and put the thread over; then two together and put the thread over across the needle, and in returning to knit every stitch, the thread over the needle counting as a stitch. Then knit another plain space of seven rows, with three rows of holes; then a plain space of three rows, and then begin the towel center.

After the three selvage stitches, knit two plain, two seam, two plain, two seam, across the needle, ending with the selvage, and knit back in precisely the same order.

The next time (which is the third) reverse the order, knitting two seam, two plain, two seam, two plain, across the needle, knitting back in the same order. The whole center of the towel is a repetition of these, four times. The little squares of twos make raised spots, which will remain if the towels are wrung lightly when washed. They should never be ironed.

Make the end to correspond with the first and finish with a heavy fringe of the cotton. Do not knit much at a time, as the towel becomes somewhat heavy before it is done; but it is pretty work and most satisfactory.

A Reason for Retiring.

The street fakir who sold a perfect panacea for every pain on the street, was resting between his afternoon and evening services and was doing a little talking in retrospect.

"I wasn't always in this business," he said, "for my real taste was in the dramatic line, and I made my first appearance as Wezzoski, the Wonderful Wizard, doing my act under a roof and on a real stage, or as often that way as the towns I struck were fixed for it. I don't know that I made any more money than in the present line, but I was in love with my art, and I could afford to make less. What is money to a man wedded to his art?" and the late wizard laid his hand on his bosom and looked up at the ceiling.

"But I was not to be allowed to follow the inclinations of my nature," he went on. "It is nearly always so, you know, in the higher walks of life; in the purely ideal, as it were. One of my acts, which was, indeed, the star turn of the whole lay-out, was the famous gun act, in which I let any person in the audience shoot at me from the rear end of the hall and I caught the bullet in my teeth and spat it out in a plate entirely unharmed. It had always been so successfully performed that I had fallen in love with it and made it the grand finale of the show.

"One night, in a Kentucky town, where there were a lot of men who were crack shots, I made such a success that I was asked to give another performance the next night, and, flattered by the attention, I did so. When the great gun act came around, a tall, slab-sided man said he would like to shoot the gun. I was perfectly willing that he should do so, and, after carefully loading the weapon in the sight of the audience, letting one and all see that I put the bullet into the gun and rammed it hard home—it was the ramming, you know, that smashed the bullet, made for the purpose, and rendered it into harmless dust—I handed it to him and took my place to receive his shot. At the command he fired, and as he did so I thought somebody had stuck a red-hot poker through my ear, and I clapped my hand to my head and took it away covered with blood. The curtain went down with a rush and I took a faint for the next fifteen minutes. When I came to, the tall man was standing in the crowd around me.

"Here, stranger," he said, sticking a \$20 bill into my hand, 'I guess you've got a right to that much, anyhow. You see, I bet Judge Jones \$50 I could plug you

through the ear, and I done it easy. You ought to be glad we didn't bet on your wind-pipe, or your spinal column.'

"Of course he had slipped a bullet in on me, and, being a crack shot, it didn't turn out so bad, but the more I thought of it, the more I felt like not giving some awkward chap a chance to gamble in that same way, and I cut the act out. But the people wouldn't have me without it, so I gave up the whole thing and took up my present line."—Washington Star.

Hot Water.

Hot water has far more medical virtues than many believe or know. Because it is so easily procured thousands think it valueless. The uses of hot water are, however, many. For example, there is nothing that so promptly cuts short congestion of the lungs, sore throat, or rheumatism as hot water when applied promptly and thoroughly. Headache almost always yields to the simultaneous application of hot water to the feet and back of the neck.

A towel folded several times and dipped in hot water, and quickly wrung out and applied over the painful part in toothache or neuralgia, will generally afford prompt relief. A strip of flannel or napkin folded lengthwise and dipped in hot water and wrung out and applied around the neck of a child that has the croup will sometimes bring relief in ten minutes. Hot water taken freely half an hour before bedtime is helpful in case of constipation, while it has a most soothing effect upon the stomach and bowels. A goblet of hot water taken just after rising, before breakfast, has cured thousands of indigestion, and no simple remedy is more widely recommended by physicians, to dyspeptics. Very hot water will stop dangerous bleeding.—National Farmer.

"You May Bend the Sapling, but not the tree." When disease has become chronic and deep seated it is often difficult to cure it. That is the reason why it is best to take Hood's Sarsaparilla when disease first shows itself.

Hood's Pills are the favorite family cathartic.

Mothers! Mothers!! Mothers!!!

MRS. WINSLOW'S SOOTHING SYRUP has been used for over FIFTY YEARS by MILLIONS OF MOTHERS for their CHILDREN while TEETHING, with PERFECT SUCCESS. IT SOOTHES THE CHILD, SOFTENS THE GUMS, ALLAYS ALL PAIN; CURES WIND COLIC, and is the best remedy for DIARRHOEA. Sold by druggists in every part of the world. Be sure and ask for "Mrs. Winslow's Soothing Syrup," and take no other kind. Twenty-five cents a bottle.

Free Samples of

WRIGHT'S CONDENSED SMOKE.

Send us 10 cents in stamps (to pay postage) and the names of ten or twenty of your neighbors that cure their own meats and we will send you a sample of WRIGHT'S CONDENSED SMOKE, the great meat preservative, the great time, money and labor saver. Address, E. H. Wright & Co., 915 Mulberry street, Kansas City, Mo. In writing, mention KANSAS FARMER.

HAIR SWITCH 65 CENTS.

WE SELL HUMAN HAIR SWITCHES to match any hair at from 65c to \$3.25, the equal of switches that retail at \$5.00 to \$5.00.

OUR OFFER: Cut this ad out and send sample of the exact shade wanted, and cut it out as near the roots as possible, inclose our special price quoted and 4 cents extra to pay postage, and we will make the switch to match your hair exact, and send to you by mail, postpaid, and if you are not perfectly satisfied, return it and we will immediately refund your money.

Our Special Offer Price as follows: 2-oz. switch 20-in. long, long stem, 65c; short stem, 90c; 2-oz. 25-in. long, short stem, \$1.25; 3-oz. 25-in. long, short stem, \$1.50; 3-oz. 30-in. long, short stem, \$2.25; 3-oz. 35-in. long, short stem, \$3.25. WE GUARANTEE OUR WORK the highest grade on the market. Order at once and get these special prices. Your money returned if you are not pleased. Write for Free Catalogue of Hair Goods. Address,

ROBERTS SPECIALTY CO., 114 Dearborn St., Chicago.

The Young Folks.

LITTLE KINDNESSES.

If you are tolling up a weary hill,
Bearing a load beyond your strength to
bear,
Straining each nerve untiringly, and still
Stumbling and losing foothold here and
there;
And each one passing by would do so
much
As give one upward lift and go their
way,
Would not the slight, reiterated touch
Of help and kindness lighten all the day?

There is no little and there is no much;
We weigh and measure and defy in
vain;
A look, a word, a light, responsive touch
Can be the minister of joy to pain.
A man can die of hunger, walled in gold,
A crumb may quicken hope to stronger
breath,
And every day we give or we withhold
Some little thing that tells for life or
death.

—Susan Coolidge.

Written for Kansas Farmer.

YOUNG FOLKS IN THE OLD COUNTRY.

BY ANNA MARIE NELLIS.

NUMBER 61.

EASTER.

To read of Easter in the month of June may not seem "seasonable;" but, as it is not my object to give directions for its observance, it may not be wholly uninteresting to tell, a long time afterward, of what I saw and enjoyed on that day in this German land.

In Berlin I found that the Easter season is observed religiously and nearly in the same manner as in the cities of America, except that on "Char-Freitag" (Good Friday) the Germans consider the most rigid religious observance a matter of very great importance. They may visit friends, the beer garden, theater, balls and other places of amusement generally, on Sunday; but to indulge in any such worldliness on Good Friday, would be a transgression unforgivable according to their notions of sacred things. On this day the streets generally seem deserted; there is no music permitted anywhere, and no one who pretends to have any church standing, would make or receive a social call. Nor is the following day, Saturday, exempt from this same severe solemnity; for it is a time commemorative of the season when the Savior of mankind was "in the place of departed spirits," when the whole earth was in spiritual darkness because the "Light of the World" had temporarily departed from it.

But on Easter day the "Son of Righteousness" has risen again, all is light, and happiness reigns once more in German cities, the same as on all other Sundays. The church bells ring more loudly and joyously than on any other Sunday of the year; and the German people consider it their duty after morning service to have the very best time the city can afford.

Young folks desiring to participate only in the religious observance of the day, decided to attend several churches of different denominations. First one chosen was the Lutheran Church; and as there are very many of them in Berlin we concluded the one the Kaiser and family attended would be good enough for us. The old "Dom" church in the Lustgarten, where the royal family usually worship, was undergoing repairs; so we knew they would be apt to honor the new "Dom" in the Monbijou Platz, next to the Hohenzollern Museum. We find that we are inclined to be just as curious as the Germans to see the members of the imperial household, although we have gazed on them several times. We went to the "Dom."

The court minister, Dryander, delivered the sermon. His appearance reminds me very much of Bishop Phillips Brooks, who died a few years ago in America, and with whose picture all Americans are quite familiar. Dr. Dryander is and has been for several years the tutor for the Crown Prince and his two next younger brothers, all three of whom were at the church on Easter morning. The Crown Prince is quite a large fellow, with light hair, not very handsome, but much resembling his father; while his next brother "Eitel Fritz" is very handsome and the image of his mother.

We quietly left the church during the sermon, and with the aid of a "droske" we reached St. Hedwig's Church in time to see and hear a part of the high mass which was sung by the Catholic Bishop and priests of the Romish church. The church was beautifully decorated, and crowded with worshipers. The music, of course, was good. This church I described in my letter telling of the funeral of Princess Hohenlohe Schillingsfuerst.

From St. Hedwig's we went to the American church to attend our own service. The Germans are early in church matters, so that they may have a longer part of the day to rest and enjoy amusements, while our American folks like to sleep late on Sunday morning and have church service

at nearly noon time—an hour and a half later than the Germans have theirs.

But it is not so much my intention to try to describe these services as to tell about the Russian midnight Easter service I attended nearly a month later. A Russian lady sojourning in Berlin had invited me to a dinner party at her home on Tempelhoferberg strasse, on March 12; and at table I found myself seated next to the beautiful Countess von Goertzen, who had been born in Russia, but was married in Germany. Her father was a Grand Duke of the Russian Empire, while her husband is a Count of the Kaiser's dominions and an officer high in the diplomatic service of the country. She spoke English, French, and German with equal facility and proved to be a very charming lady to me.

After telling me many things about her own country, she said: "I would be pleased to have you attend our midnight Easter service at the Russian embassy and if you will come I will arrange with our hostess to bring you with her." I replied that I certainly would be glad to do so.

I heard nothing further about it until I met the Countess again on April 29th at the house of our mutual friend. She said: "Shall I not see you to-morrow night at our Easter service?" I was surprised, and remarked that I had attended the Easter services nearly a month before; and supposed that there were no more for this year. She then informed me that I evidently referred to the Protestant and Roman Catholic churches, but hers was the Greek Catholic, and that their Easter did not occur until May 1. I did not wish to show my ignorance on the subject, so asked no further questions, but afterward learned that very many years ago, before Christian people became wise, there used to be differences in opinions amongst them and with other matters they could not agree upon a time when Easter should be observed; so the "Eastern Church" appointed one date, and the "Western Church" appointed another date, and in that way all were pleased, except that each one would gladly have been enabled to compel the other to accept the right date.

The beautiful Countess said: "I am so glad that to-morrow is Easter. I am so hungry." To my look of surprise, she explained that her church required abstinence from all flesh meats for seven weeks before Easter; she had eaten no meat, butter, nor eggs and not even fish for seven weeks, but that on the next night, after midnight, there would be a big feast at the Russian embassy after the religious service. Here was a highly educated, beautiful, and wealthy lady, the daughter of a Duke, the wife of a Count, who was actually hungry and longing for food. I could not entirely conceal my astonishment. She surely was religious, while I had never refrained for one whole day from eating because of the church. Oh, how sinful I felt—for a minute or two.

At 11 p. m., on April 30, I met my Russian lady friend at her home on Tempelhoferberg street, and we were safely escorted to the Russian embassy on the Linden, arriving there a half-hour before midnight. The church is in the rear of the embassy and is the only Greek Catholic church in Berlin. It is maintained in the spiritual interests of the officials of the embassy and their sojourning friends in the city.

The embassy has very extensive and royal apartments, but the chapel is not large. We passed through the main entrance or carriage-way, past the gorgeously liveried footmen—the chief of which was dressed in a bright red coat heavily trimmed in gold, profusely decorated with the Russian black eagles, white knickerbockers, red hose and patent leather pumps—through a small court to a door labeled in Russian and German. The German label was: "Die Kirche," which informed me that this was the church. This door opened into a narrow hallway and then to the right into the church room, which was trimmed and decorated like a temple should be, and was brightly lighted with hundreds of candles.

There were only a few chairs along the wall, and those were near the front, as the worshipers generally were expected to stand during the service. We found not many people there as we had come early purposely, so as to see the decorations before the room should be crowded. We took our places in the center of the room and then I had time to look about and note whatever should be of interest to me.

The altar, in front, is separated from the "holy of holies" by a golden partition, beyond which no woman is ever allowed to pass; the little gate in the center of the partition only opens and shuts for priests. Above this door are pictures of "the Virgin" and "the Christ," and between the two a golden image of a saint, about three feet in diameter I should judge, though at the distance I could not rightly determine the size. My friend said she did not know who the saint was, and that it was only for an ornament.

On the side walls of the altar as well as

on the walls of the church generally were pictures and images of the Crucified and the saints, and under each saint stood a golden candelabrum into which the people placed their lighted candles according to the particular saint each wished to patronize. In the center of the room hung a huge chandelier which had 236 lighted candles. I counted them.

Just in front of us, in the center, before the altar, rested a golden sarcophagus; and I thought surely some Prince must have left this world of sorrows and cares and that this occasion was to be his funeral also. I noticed the Russians were going up to it and kissing the lid at the head and the foot; so I asked my friend what royal personage was within. She said it was no person at all but a representation of the "Prince of Peace," who by it was thus shown to be still "in the place of departed spirits." The lid was decorated with beautiful flowers. She called my attention to a glass case at the side of the altar, where the sarcophagus is kept at all times except during the Easter service.

The room was soon filled to overflowing by the coming worshipers, except a space in front, and soon the members of the embassy with their families filed in and then that too was filled and not even "standing room" was left to spare.

The ladies were dressed in white or light silk gowns with long trains. They wore no hats but had white gloves, fans and most gorgeous jewels. The men were in full uniform. The Ambassador, Count von Oster-Haken, wore trousers with deep gold braid stripe, blue coat with gold collar and red sash over the breast, which was literally covered with shining medals studded with diamonds.

Each officer wore one white glove, on the left hand—the same as did the ladies; the right hand being uncovered so they could cross themselves with holy water.

During all this I noticed one man busily passing through the crowd and placing lighted candles under various saints as he was directed by those who purchased of him. My friend asked me if I did not want a candle burned to one of the saints; I said, of course I did. So we gave the man 20 pfennigs and he lighted one of his biggest candles for me and inquired what saint it was for.

Now I was puzzled; my sponsors had never taught me to distinguish one saint from another, but I must not let my friend know my ignorance. I pointed to the one who seemed to have the fewest candles and trusted to kind Providence that my saint was a suitable one to be chosen. I don't know even now, what saint I have selected. I hope it was Saint John—the one I call Uncle Saint.

Before the Easter service began, the "holy supper" was given to a child by one of the younger priests, and the bread was given in crumbs with a golden spoon from a golden dish, while a "holy napkin" was held under the child's chin and then the child's mouth was wiped with the blest cloth to prevent the slightest crumb of the sacred food from being wasted. Before the child received the holy wine, the mother deposited a golden 10-mark piece on the golden plate as an offering for her child, which was only 3 years old.

When midnight arrived, the choir began to chant: "Christ is risen," then the gate of the "holy of holies" opened and the high priest, followed by a small train of lesser priests, entered the altar. They were dressed in purple velvet robes with high caps and hoods. The robes were magnificent with gold and embroidery. The high priest came first with his censor, with which he purified all the pictures and images and also the audience. He then retired to the "sanctum sanctorum" and reappeared with a golden censor, with which he purified the sarcophagus, walking around it three times. Then the priests lifted the cover of the coffin on which was the representation of the body of Christ, and carried it into the "holy of holies," the choir and audience chanting the while: "Christ is risen."

Then lighted candles were given to every one in the audience, which they held aloft, while the priests bearing the risen Savior marched around the room. This ceremony is usually done in Russia by marching outside around the church, but lack of space prevented at this time, and the procession went only into the corridors and back through the crowded room. As the procession passed, each one crossed himself reverently; then the image was returned to the sarcophagus and the latter was lifted to its place in the glass case.

Then the Ambassador advanced and kissed the Christ picture on the Bible, and kissed the priest three times—first on the left cheek, then on the right and again on the left. Then came the Ambassadors, who kissed only the Bible and the cross. She was followed by the rest of the embassy and the nobility and lastly by the audience generally.

We watched for the beautiful Countess von G. She came to the altar, with the embassy, more beautiful than ever, in

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white silk, cord lace and long train; her only ornaments were diamonds and with these she sparkled as though covered with stars.

It was 2 a. m. when my Russian lady friend and myself reached home and went to rest.

Young Folks in the Old Country.

The series of letters written by Miss Anna Marie Nellis from Germany, which has been published in Kansas Farmer during the past two years under the above title, has been gathered in book form and printed on fine paper by Kansas Farmer Company.

The book will be 10½ inches long by 7½ inches wide, and will also contain four letters written by Miss Celeste Nellis, from Berlin, and published in Topeka Capital.

The number of pages will be 220 and will contain forty-nine illustrations, twenty-four of which are page pictures. Only twenty of the illustrations appeared in Kansas Farmer, as the plates were made for the book after the letters illustrated had been printed.

The book is being bound by Crane & Co. The edition is only 250 copies, one hundred of which will be reserved for Miss Nellis and one hundred and fifty will be offered for sale. The binding will be in red cloth, in same style as Crane's edition of "Ironquill's poems, for half the edition, while the balance will be bound in imitation morocco.

Any one desiring a copy can be accommodated until the edition is sold, by writing to Kansas Farmer Company.

The price of red cloth binding will be \$1, while the other binding, being costlier, will be placed at \$1.25. If desired to be sent by mail, add 15 cents for postage.

Information About Kansas.

Kansas was discovered by Francisco Vasquez Coronado in 1542; was purchased from Napoleon, being included in the Louisiana purchase, in 1803; was explored by Zebulon M. Pike in 1806; was first settled at Fort Leavenworth in 1827; was organized as a Territory on May 19th, 1855; was admitted into the Union as a State January 29th, 1861. Its area is 81,318 miles, in which are embraced 52,228,000 acres. Its latitude is 37° to 40°, north; its longitude, 94° to 102°, west. It is more than 200 miles—north to south—wide, and more than 400 miles—east to west—long. Its name is an Indian word, signifying "Smoky Water." Its sobriquet is "Garden of the West." Its motto is "Ad Astra per Aspera."—Emporia Gazette.

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All advertising intended for the current week should reach this office not later than Monday.
Every advertiser will receive a copy of the paper free during the publication of the advertisement.
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KANSAS FARMER CO., Topeka, Kans.

F. R. French, of the Lakin Investigator, says that the prettiest sight in the world is to be seen along the Santa Fe in western Kansas when the thousands and thousands of acres of alfalfa are in bloom.

According to the Secretary of the Treasury, the Government has been reimbursed for \$27,236,512 principal and \$31,211,711.75 interest, being the total indebtedness of the Union Pacific Railroad Company to November 1, 1897, and for the principal of the Kansas Pacific indebtedness, amounting to \$6,303,000.

The St. Louis wool market shows a strong improvement and an advance in quotations. The sale of Western wools last week was 130,000 pounds per day. The latest quotations for Kansas and Nebraska wools are as follows: Bright medium, 18 to 18½ cents; dark medium, 16 to 16½ cents; light fine, 14 to 15 cents; heavy fine, 11 to 12 cents.

Governor Stanley has wisely made a new departure and established a precedent which his successors in office will find advantageous to maintain hereafter. He has appointed a committee of three Kansas women to visit the various State institutions to make observations and give him such pointers as will enable him to make recommendations to the Board of Charities. This special committee consists of Mrs. Stanley, Mrs. Belle Harbaugh, of Erie, and Mrs. John Q. Royce, of Phillipsburg.

The legislative committee has selected Parsons, Kans., as the location for the new insane asylum. Fourteen Kansas towns competed for this prize. As is usual in such cases, the disappointed contestants are very bitter, and already rumors of jobbery are prevalent, and an investigation of the committee and an enjoyment of the state auditor from issuing warrants for the construction of the asylum is threatened. Cy Leland and the M., K. & T. Railway Company are responsible for the location at Parsons, according to some of the promoters of other locations.

The State University will soon issue Volume V. of the University "Geological Survey" for the year 1898. The volume is devoted wholly to a report of Kansas gypsum and gypsum cement. The main object of the University geological survey of Kansas is the investigation of the mineral wealth within the State. The survey has already done good work in calling attention to these various minerals, the value of whose aggregate product in 1897 amounted to nearly \$12,000,000. Gypsum was the fourth non-metallic mineral in value of product, being surpassed by coal, salt, and clay. Its value that year was over \$252,000.

Clew's Weekly Financial Review says that at present the market is undoubtedly depressed by the large amounts of these new securities which have been offered to the public; and it is quite likely that insiders will not be able to unload as successfully as they once anticipated. A few of the new concerns are worthy of public confidence; but many are not, and the situation to-day is much the better for the refusal of the public to take them. The trusts, we think, have come to stay. Prosperity is upon us, and seems likely to remain with us for some time to come; so the combines, good and bad, will probably

continue successful until the next period of overproduction and reaction begins. Then the test must come.

MISSOURI IS "POOR OLD" NO MORE.

A trip through northwestern Missouri over the Rock Island Route produces a different impression from that of a trip through the same region in the 50's, or at the close of the Civil war, or twenty or ten years ago. One can not fail to be impressed with the thought that the stain left upon Missouri soil by slavery is being obliterated. It was said before the war that the line between a slave State and a free State needed not to be marked, but that the transition from high civilization to semi-barbarism was abrupt and sharp. At the close of the war the contrast between the material advancement on the one side of the line with the woe-begone tumble-down conditions on the other was most marked. During the next few years a large part of the people's energies on the one side were expended in bawling the inevitable, while on the other side all human forces were devoted to bringing the resources of a richly endowed land into subjection and use.

The date when Missouri changed from waiting to working can not, perhaps, be definitely told. But to-day the farm home, the school house, and the church, the public road, the railroad, and the town have that satisfactory appearance which betokens the prosperity of contentment. In the rich pastures are to be seen the Short-horn, the Hereford, and the Angus in cattle. Fashionably-bred Poland-China, Berkshire, and Chester White swine luxuriate in fields of clover. Orchards and fields in Missouri present no contrast with those in Iowa. We may not be able to determine just when it ceased to be "poor old" Missouri, and just when it began to be bright, progressive Missouri, but that the change is fully consummated there is no doubt.

With the natural resources possessed by Missouri, and with hopefulness, energy, and intelligence such as is now manifest, with the disappearance of the last vestige of lamentation for conditions which can never return, conditions which would be a clog to progress if they could be reinstated, there appears before the State a future with much to be desired and with little to be regretted. True, there may be seen, as the train passes the station, too many men who are wearing their hinder breeches thread-bare against the battens of the station-house, but this observation may be made also of the stopping-places north as well as south of the old Mason and Dixon line. The cure for loafing as well as for tramping needs to be applied North as well as South. But while Missouri keeps step with the present march of progress, her energetic people will not be greatly burdened with the support of the small percentage of non-productives, whether they be the hoboes who tramp from town to town, the loafers about railroad stations, or the wealthy idlers whose inheritances have made them useless.

Missouri is "poor old" no more, but is moving forward with a regular Anglo-Saxon step, alike inspiring to her young men, silencing to her croakers, and attractive to the rest of the world.

ABOUT MUTUAL INSURANCE.

There seems to be no question as to the growing popularity of the mutual plan of insurance. The reason for this seems to be quite obvious. The risks are taken with a less margin of profit to the companies than the "old line" companies exact, and yet, after many years experience, the charges of the mutual companies have been found ample for safety.

The success of the mutual companies is largely due to the patronage obtained from farmers, hence the mutual companies are much stronger in what are known as the agricultural States. Each company usually confines its operations to the State in which the company is chartered, consequently takes only such risks as are safe, another reason why they can take risks cheaper than "old line" companies, which have to depend wholly on agents, whose paramount interest is to secure as large a commission as possible.

Kansas, however, is not as strong as most of the other agricultural States in the number of mutual companies or in the volume of business written, mainly for the reason that heretofore the insurance laws have not been so favorable for their establishment and maintenance as now. Nevertheless, the popularity of the plan has led to the establishment of a number of mutual companies in Kansas, all of which are doing a satisfactory and increased business.

The Kansas insurance department gives the following list of mutual fire insurance companies now authorized to write business in Kansas: Alliance Co-operative, Topeka; Blue Valley Mutual, Marysville; Bremen Farmers' Mutual, Bremen; Brown

County Farmers', Morrill; Farmers' Alliance, McPherson; Farmers' Mutual, Hollywood; Farmers' Mutual Fire of Butler County, Eldorado; Kansas Millers' Mutual Fire, Kansas City, Mo.; Kansas Farmers' Mutual, Stitt; Marshall County Farmers' Mutual, Marysville; Mennonite Mutual, Newton; Midland Fire, Kansas City, Kans.; National Mutual Insurance Association, Pittsburg; Republic County Mutual, Belleville; Southern Kansas Mutual, Wellington.

SOME KANSAS STATISTICS.

Complete returns by assessors, of population and agricultural statistics, have been received by Secretary Coburn, of the State Board of Agriculture, from thirty-five, or exactly one-third of the counties in Kansas. Twenty-five of these are entirely in the western half of the State; thirty of the thirty-five are within the western two-thirds, and doubtless may be accepted as fairly indicative of the situation in the remainder of the State.

In these counties there has been a net increase in population of 11,582, or 4.4 per cent., although the five counties of Greeley, Haskell, Lane, Stanton, and Wallace report an aggregate loss of 100. The largest increase is 1,948 in Sumner County, Harper following with 1,255, and Ellsworth next with 1,183.

Of winter wheat sown there was an increase of 51,000 acres, or practically 3 per cent, Mitchell being foremost with an increase of 32,740 acres, Ellis with 25,000 acres, Cloud 24,000, and Stafford with 16,000 acres. The corn acreage indicates a decrease of 1.5 per cent; of oats 14 per cent, and rye 7 per cent, while an increase of 100 per cent, or nearly 79,000 acres is shown for barley. Ness County has increased in barley almost 11,000 acres, and Lane, Pawnee, and Rooks, each by more than 7,000 acres.

Sorghum for forage, Kaffir-corn and alfalfa, each show their usual growth in popular appreciation, by an increase of 13, 12, and 21 per cent, respectively.

All kinds of live stock increased handsomely in numbers, except swine, which seem to have fallen off 15 per cent from the preceding year.

The number of horses increased 5 per cent; milch cows, 11 per cent; other cattle, 17 per cent, and sheep 13 per cent, and the increase of wool clip shows likewise 13 per cent, suggesting that in the 35 counties referred to "The Modern Sheep" is coming to be somewhat better understood and appreciated.

On the whole, these returns certainly convey the idea that Kansas, in population and in agriculture, is moving upward and forward, and that her soil and innumerable advantages are being better utilized.

VACCINATING FOR HOG CHOLERA.

The editor had the satisfaction, last week, of witnessing the inoculation of a lot of shoats to make them proof against hog cholera. Experiments have been conducted at the agricultural college, and under the direction of Dr. Fischer, the college veterinarian, at other places, for several months. They have uniformly proved successful. Not an inoculated pig has taken the disease, though exposed in every possible way. In the larger experiment begun last Saturday, 90 shoats were treated.

The treatment was very simple. Two young men held the pig down on his side. He, of course, objected to this, and raised his voice in protest against it. But a strong hand invited him to shut his mouth, which invitation he reluctantly accepted. His ear was drawn gently forward and the point of a hypodermic syringe was inserted in the loose skin at the base of the ear. Not a pig objected to the insertion of the instrument, his mind being fully occupied with the effort to squeal and to get up. Not one was seen to flinch on account of the needle point. The proper quantity of the "culture" was injected; the instrument was withdrawn; the finger pressed for a moment over the puncture, and piggy was allowed to get up and go his way. This he did without a second invitation, and expressed unmistakably his satisfaction with this final act of the proceedings.

The only apparatus used consisted of a little nickel-plated syringe—about as large as a lead pencil that has been half used up—a couple of small glass vessels—common tumbler would answer if provided with glass or porcelain covers—say sauce or butter dishes. One of these vessels should contain carbolic acid in which to dip the syringe each time it is used, so as to avoid giving to any pig any disease germs which may have been in the system or on the ear of one previously operated upon. The other glass vessel should contain the cholera "culture." A portion of this is taken into the syringe, and, as before stated, injected into the pig's ear. The cost is but slight. The labor is quickly performed. The entire 90 pigs were treated in rather less than an hour. No skill is

required. Anybody who can spread bread and butter can do it.

The veterinary department of the Kansas Experiment Station has been at work for several months on this preventive treatment, and it now seems probable that there is available to the swine-raiser a cheap and ready means of insuring against the dread disease. The results of this large experiment will be awaited with interest.

GERMAN BEET SUGAR.

A report of interest to sugar beet growers has been received by the State department at Washington from Consul Henry Diederichs, at Magdeburg. It is a collection of the most reliable statistics obtainable since 1877. It is almost entirely composed of tables showing development of the industry in Germany. In closing, Consul Diederichs says:

"The future of the German export trade in sugar has of late been engaging many minds. The figures in the report clearly show that Germany must find an outside market for two-thirds of her production and that most of this surplus for the past five years has been sold to England and the United States. It also will be seen that in 1897 more than double the usual quantity was rushed to our country in anticipation of the enactment of the Dingley law, but that the following year showed again a fair average of exports. The first three months of the present calendar year seem to furnish no reason for complaint to the German exporter of sugar. From January 1 to March 31, 1899, the values of sugar declared at the United States consulates at Magdeburg, Hamburg, Danzig, and Stettin for export to the United States amounted to \$3,739,934, an increase of \$3,455,095 over those reported during the first quarter of last year."

Kaffir-corn for Roughness.

Editor Kansas Farmer:—In your issue of June 1, occurs an inquiry concerning Kaffir-corn for "roughness." My experience with this feed has been highly satisfactory to me.

As soon as the ground has warmed up for all summer, Kaffir-corn should be planted. For hay, drill with the ordinary grain drill on well-prepared ground, from one and one-fourth bushels to one and one-half bushels per acre. This will grow about five feet tall, and will be a mass of foliage nearly to the ground—the stalks being made up, mostly, of concentric rings of foliage. The crop will head and should be cut before the grain is hard. The self-binder puts this feed in a very desirable shape for curing and feeding. I have planted this crop from April 26 to July 4. However, the early planting, that does well from the start, can be harvested at the more seasonable time and escapes the more unfavorable portions of the summer season. That planted July 4 was caught by early September frosts. This season has been favorable for broadcasting. I have one patch planted April 26 in this manner, that now stands eighteen inches high. It is ready for hog pasture.

One bushel of clean seed will drill, for cultivation, twelve acres of ground. This crop run through the threshing-machine, will yield from twenty-five to forty-five bushels of grain and a quality of "roughness" that is relished by stock, providing harvest takes place as soon as the grain is firm. That there is a choice in varieties, when growing this crop for roughness, is certainly true. **WALTER J. BURTIS.**

Fredonia, Kans.

Topeka Horse Show.

The Topeka horse show and race meeting will be held at Topeka, June 20-23, 1899.

Mr. F. H. Foster, the secretary, says: "At the last meeting of the kind held in Topeka I did not know for certain of a single horse that could be depended upon, to be entered for the races up to the day of closing entries. This year, however, more than a week before the closing of the entries for the meeting to be held here commencing on the 20th of this month, we are absolutely sure of 65 horses. I feel confident that there will be 150 entries. At the previous meeting, which was remarkable for the large number of entries and large fields, there were only about 120 entries."

"I am receiving numerous letters from all over the State inquiring about the horse show feature of the meeting, from prospective exhibitors. We are much gratified at the great interest manifested by our citizens in this feature and the generous support the business men are giving it, in the way of donations for the prizes. "The horse show feature alone will equal in merit the first meeting of the Kansas City horse show, which has since become famous all over the country. Miss Rex, the best and most celebrated saddler in the country, will be here, and all of the best turn-outs in Kansas City, gotten up for the special purpose of such exhibitions."

WATER STORAGE.

Read before the Trans-Mississippi Commercial Congress, at Wichita, last week, by F. H. Newell, Hydrographer, United States Geological Survey.

The most important problem that can come to any body of public men, commercial or otherwise, in the West, is that of the increased utilization and development of the vacant lands both in public and private ownership. Before this question most of the other matters sink into comparative insignificance, for without an increase in population and productive capacity the West can not continue to furnish a market for the manufacture or a field of operation for the varied industries of the country. The utilization of the vast extent of vacant land is not something which should be left to the farmer; it is pre-eminently a matter for the business man, whether concerned in manufacturing, transportation, or in handling the products of others. In fact, the farmer, as such, has least concern with the development of the varied resources of the vast West. As long as he has a market for his produce, it makes little difference to him whether the vacant lands of an adjacent county or State are populated. To the merchant, however, the matter is entirely different. Continued stagnation or retarded development must inevitably operate to reduce his chances of financial success.

The development of the agricultural resources of the western half of the United States has practically come to a standstill, or at least is going on only at the average rate of the whole United States. There are, of course, local exceptions, but in comparison with the conditions existing ten years ago it appears as though development had stagnated. The reason of this is not difficult to give. The greater part of the lands are arid or semi-arid, and, although among the richest in the world, will not produce crops except by the application of water. Irrigation has been introduced and carried forward in favored localities all over the West, and where the ditches have been built by the land-owners the profits or increased land values have been enormous. The opportunities for continuing developments in this line have nearly ceased because of the fact that these choice spots have been taken. There still remain great areas to which water can be brought from rivers of notable size; but before this can be done, large sums of money must be invested in the construction of expensive works. The experience of the last ten years has shown that these large irrigation works do not pay, and probably can not, as a rule, be made to pay a fair interest on the investment.

While it has been demonstrated that irrigation investments on a large scale do not return a fair interest to the persons who furnish the money, yet, on the other hand, there is no doubt that, taking the community as a whole, the benefits are far beyond the first cost; but, unfortunately, these benefits do not redound to the advantage of the men who have furnished the capital and have taken all the risk and trouble of managing a large enterprise. These facts, although recognized for some years, have been so unpalatable to the promoters of the country that the men who have had the courage to state them have been continually assailed and the correctness of their statements called into account. The truth, however much we dislike to admit it, is so generally recognized that it is worse than useless to attempt to conceal the actual conditions. Many instances can be cited where meritorious projects now under consideration are awaiting definite action because it is impossible to show to the investors a single example of profitable investment of this character. Millions of dollars could be had for the construction of irrigation works, if it could be demonstrated to impartial and critical experts that similar investments were now returning a fair interest on the original capital employed.

We have the anomalous condition existing of great enterprises of State or national importance languishing for need of capital. At the same time it is admitted that these enterprises will benefit the community to a far greater extent than the first cost. On the other hand are millions of dollars awaiting investment, but deterred from the fact that it can not be shown that these enterprises will prove profitable to the investors, although unquestionably yielding returns far in excess of their cost. Putting these things together, the question arises, What shall be done? And the answer must be that the community benefited, whether the State or nation, must in some way either furnish the capital for building these great works, or secure to the men who take the risk a fair earning on their investment. How this is to be done is a matter of detail and can not be worked out until general recognition can be had of the conditions just described.

The utilization of the vacant lands now comprising a third of the whole United

States, and the consequent increase of population and of all industries, is to a large extent dependent upon securing more water. It is not possible, taking the year as a whole, to secure a greater amount than now exists, but it is possible to increase the available supply many fold by saving that portion which now goes to waste. In order to increase the available supply two methods are especially prominent. The first is that of storage of the floods or winter waters, and the second is by pumping water from underground, or from streams from which it can not be taken by gravity. Pumping is essentially the problem for the Great Plains region, and to a less extent, for many parts of the West. It is particularly important in many portions of California, where the conditions are such that water storage can not be had.

The great advantage, or one of the great advantages, of pumping water for irrigation is that the man who would develop a tract of land, or the farmer who cultivates it, is practically independent. Most of the successful pumping plants are, and always will be, small, and matters of individual concern. Pumping on a large scale, while it will undoubtedly be done in many localities, will, from the nature of the case, never be as important as the raising of water by small, cheap, or home-made devices. A small pumping plant can be installed by almost any farmer or mechanic, and with a little ingenuity and care can be made highly profitable. If not successful the first time, it is capable of indefinite modification and change. A mistake made at the outset does not ruin the whole enterprise, as in the case of water storage.

The power used for pumping water is as varied as the kinds of machine. In some localities horses or oxen are successfully employed, and in others various forms of motors operated by gasoline or steam engines, by water-wheels, or by other devices. The most common source of power, and by far the most important, is that from the wind. This is particularly the case on the Great Plains, where thousands, and possibly millions, of windmills have been, or are about to be, erected. The power is sufficient for all purposes, and the kind of mill and pump matters little, although in the long run the best must be used. Every encouragement should be given to the increase of small pumping plants suited to local circumstances, for by the use of these farmers learn quickly how to produce the best results with the least amount of water, or of wasted, energy. They thus become experienced and competent to take up irrigation farming on a larger scale.

The reasons for the financial failure of large irrigation works need not be discussed at this time, but it is important to know that one of the causes, if not the most important, has been the fact that a few farmers purchasing or occupying lands under these great systems have been competent, at first, to handle the water and to successfully raise crops. Many have failed or have become discouraged, and the great majority have not been able to make the payments agreed upon. Those who have succeeded have often done so by using the water in the most wasteful fashion, and have not only injured their own lands, but have often ruined adjacent tracts and have jeopardized the success of others by the lavish spreading of water over the surface. Using water from the pumping plant, it is not possible for a man to be as wasteful as when he obtains his supply from a gravity system, and thus the thousands of farmers who are dependent upon windmills or other forms of motors for raising water, are becoming adepts in the art of producing the largest crop with the least waste. Whenever a large body of such experienced men can be induced to settle under a great irrigation canal one of the principal causes of failure will be removed.

The development of the vacant lands by pumping can be left largely to itself, as it is a matter of growth and of the spread of information. But the providing of great storage works is an entirely different question; it can come only through sustained effort and interest on the part of the public as a whole. Pumping water may suffice for the Great Plains and for some favored valleys, but for the arid West as a whole water conservation is the only source of relief. It is useless to hope that this will come through private enterprise. Reservoirs, mostly small, may be built here or there by corporations having large landed interests, or concerned with the increase of supplies for a city or suburban population, but they can not be constructed for a development of great areas of improved, or partially improved, farming land. These must either lie idle, or united action must be taken along definite lines established by careful investigation and expert report.

The importance of water storage has already been recognized by the Congress of the United States, but the efforts of Senator Warren, of Wyoming, and other Western Senators, have not been as strongly sustained as is necessary for ulti-

mate success. They must be continually and strongly backed by the great commercial and transportation bodies of the country, as well as by the people at large. If the localities are wisely selected and the structures are economically built, there is no doubt but that storage works will return directly and indirectly their cost, and ultimately a reasonable percentage on the investment, especially if we take the increased values of all taxable property. The funds thus used, if appropriated by the State or nation will ultimately come back, and can be used over and over again. These funds can not be made available until the united sentiment of the country demands forward movement along definite lines. It is waste of time to talk about private capital constructing these great works, and less than useless to argue that the capitalist ought to be willing to take the risk of building great storage works with the possibility of receiving his money back again, if successful, after the lapse of many years.

Farmers' Alliance Insurance Company.

Recently a Farmer representative called at the office of the Farmers' Alliance Insurance Company, located at McPherson, Kans., where Jno. W. Yowell, president, and C. F. Mingenback, secretary, afforded every facility for a thorough examination of their office and methods of doing business. Everything was found to be very systematic, with a complete check and tracer for every transaction. The writer was strongly impressed with the care and conservative method of accepting only safe risks.

This company is one of the pioneer mutual companies, established eleven years ago, and during that period has paid losses amounting to \$200,000. A summary of the business on June 1, shows that farm risks in force June 1, 1899, were \$12,625,083. Premium notes, \$141,497. Reserve cash fund, \$22,468.25. All losses paid to date in full. Total amount of farm risks written during May, 1899, \$800,000.

The secretary showed the writer a number of recent letters from policyholders who had losses, and the following is only a sample of all. J. R. Kane, of Greensburg, Kans., under date of May 22, 1899, writes: "C. F. Mingenback, secretary: Your letter containing draft for \$372 is at hand, and for promptness, I think your company has beat the record, and it will be a pleasure for me to do all I can to advance the interests of your company in this county."

The Farmers' Alliance Insurance Company insures property against loss by fire, lightning, cyclone, wind-storm, or tornadoes. They also issue a policy insuring live stock. It is a good mutual company, a Kansas institution that deserves success and the patronage of Kansas Farmer readers. Look up their advertisement and write their secretary for further information.

Young Queens.

Editor Kansas Farmer:—In issue of May 25, you say: "The apiarist who goes into the honey season with all young queens of the present early spring rearing is usually ahead at the end of the honey season, with the largest crop of honey." Please tell us, through the columns of the Kansas Farmer, when is the best time to get rid of the old queens. Shall we kill them as soon as the swarming season is over, or before? Also, what causes a swarm to leave a hive after it has been apparently contented for several days?

ALICE V. BIRCH.

Manhattan, Kans.

The proper time to re-queen is as early in spring as possible and long before swarming time or beginning of the honey season. This may be done by rearing queens early, say during the month of April, in this locality; or if the spring is late, like the present one, we can not do much at rearing queens before May. Some apiarists who make a specialty of this kind of management, send South for their queens, as they can be reared in the Southern States a month or more earlier than here.

To get the full benefit of young queens, we must have them thus early, in order to get their service during the honey season, as breeders and non-swarmers, as well as their service in autumn as breeders.

It is a very unusual thing for a colony of bees, or a swarm of bees, to abscond and leave the hive after they have been in it a few days and are well at work, except in case of excessive heat and melting of the combs by the same, when they will frequently leave the hive. In case of second swarms—those having virgin queens—the swarm might follow the queen on her coming out on her fertilization trip, which sometimes occurs, but not frequently.

A. H. D.

Monson—"My wife's mother is a jewel." Brockley—"Ah! but my wife's father is a jeweler!"—Philadelphia North American.

Publishers' Paragraphs.

We take pleasure in referring our readers to the advertisement of the Osgood Scale Co., 53 Central street, Binghamton, N. Y., whose familiar face appears in this issue among our advertising friends. This well-known company has a reputation of over forty years back of the goods they send out, and we believe it will pay all our readers to correspond with them before buying scales this season.

Kansas State Mutual Hail Association, of McPherson, Kans., is represented in our advertising columns this week. This company was established this year after the passage of the laws by the legislature last winter providing for the same. Mr. J. W. Yowell, of McPherson, is president of the association. He has been identified with mutual insurance in Kansas for several years and was one of the organizers of the Farmers' Alliance Insurance Co. eleven years ago, and for several years was its president. The Kansas State Mutual Hail Association was organized for the purpose of conducting a hail insurance business in Kansas. It insures wheat, oats, rye, barley, and flax only, against loss or damage by hail. For further information consult the advertisement in this issue.

Natural body brace is a device used as a rational cure for the ills of womankind. It is not simply an abdominal supporter and shoulder brace—it is that and much more. It takes hold of the whole trunk so as to secure erect posture, and properly balance and support every internal organ. This brace has the endorsement of the best medical profession, and the enthusiastic praise of its users who have been cured by its use. It is manufactured by the Natural Body Brace Co., Salina, Kans.—one of the most successful institutions in Kansas, which, running at its full capacity, can hardly keep up with the orders received daily from all parts of the civilized world. The brace is sold on a thirty-day guarantee. Every lady reader of the Farmer is advised to consult the advertisement and write for further information.

For a description of Marconi's wireless telegraph that anybody can understand, and an account of its latest achievements that everybody will be interested in, readers may be referred to the June number of McClure's Magazine. The article is written with the assistance of Mr. Marconi himself, by Mr. Cleveland Moffett, who himself sent and received messages by the wireless telegraph across the English Channel; and it is fully illustrated from photographs taken expressly for the purpose. Another interesting and valuable article in this number of McClure's is an account of negotiations between Admiral Dewey and the Spanish commanders that led to the final surrender of Manila practically without any fighting between the land forces. It is written by Oscar King Davis, Manila correspondent for the New York Sun, from the diary of M. Edouard Andre, the Belgian consul at Manila, through whom the negotiations were conducted. It is, therefore, authoritative; and it is a story that has never before been fully told. It gives new illustrations of the rare tact and sagacity of the American admiral.

Hamilton College, in Clinton, New York, founded by Samuel Kirkland, of Connecticut, in 1793, was originally established as an academy for the education of the Indian tribes of New York, among whom Kirkland had been doing important missionary work. The Indians, however, did not appreciate these educational advantages, and, as the academy became filled with pupils from the families of early Connecticut settlers in that region, a collegiate charter was soon applied for. Founded on Puritan principles, Hamilton College has always been faithful to its New England traditions. An excellent account of its founding and development is contributed to the New England Magazine for June by Mr. E. P. Powell. He entitles his article "New England's First College Out of New England," in his account paying tribute to all who have helped to keep Hamilton true to the ideals of her founders. "We may be sure," he says, "that the strong infusion of New England spirit will remain with Hamilton and mark its future. It will have the intensity and tenacity which were chief characteristics of Puritan thought and life." The article is fully illustrated with views of the college buildings and grounds, and with many portraits.

"When I went over to France I couldn't make anybody understand me, and yet my French teacher had told me I spoke the language like a native." "Did he say you spoke it like a native of France?" "N-no."—Chicago Tribune.

Lariat Lem—"Podner, what makes you think crime is a goin' to increase in this here camp?" Placer Pete—"I seen in the paper this mornin' that they was a Eastern perferer comin' out this way to give lessons on the pianny."—Chicago News.

Horticulture.

THE KIEFFER PEAR.

By Col. J. C. Evans, of North Kansas City, Mo., read before Missouri Valley Horticultural Society.

There has been a great many things said, and there seems to be more recently than ever before, about this pear. It is not strange that more is being said lately, because a great many sections of country have had their first good crop on young trees the past year, and the markets at picking time were flooded with fine-looking, well-developed fruit. In the absence of a full crop of apples they seemed more conspicuous and have caused more comments than ever before. In looking over these comments, it is remarkable that scarcely any two agree on any one point, even to the spelling of the name, and you must not be surprised, when you hear this, if it differs from all the rest. This is not, however, a comment on the Kieffer pear, so much as on the comments before me. I see one single one says it is good to eat; two say it is a good cooker; two say it is good to preserve, can, and dry—to sell not to eat—I am reading from several of our leading agricultural and horticultural journals. Some say it is good to grow, but hardly fit for hogs to eat, so that every fellow has his own opinion of it. Go on the market and hear remarks made by people who want to buy something good and you will find them just in keeping with these comments.

It seems to me if there is real merit in this pear, with our boasted progress in horticulture, and as much as we want a good reliable pear, it has taken a long time to develop it.

It is some twenty-five years since Peter Kieffer, of Philadelphia, first introduced it to the public, and only for the efforts of enterprising nursery men (thanks to them), who wanted to sell trees because they grow quick and easy, still less would be known of it to-day. Its reputation for poor quality seems to have taken an even start with its introduction, and kept up with the trees as fast and as far as they were planted.

It is true, some commercial orchards have been planted in some few sections of the country, and their crops have been marketed with a varied degree of results, from a living profit down to nothing. Very few of these trees have been planted with any regard to soil, location, or other conditions, and when the fruit was marketed it was without any regard to the condition of either the fruit or the markets; but just when the grower thought it was ready to be picked it was rushed off to the nearest market, and in the growers' hurry to get there first they all got there at once, and the result was an overstocked market of fine-looking fruit, but so hard and immature that no one could use the pears for anything and only those who did not know them would buy. I have seen on the Kansas City market wagon-loads of the finest Kieffer pears, some dumped loose into the wagon, like corn, until the wagon was full; others would have them in barrels, in boxes, and baskets, and any other conceivable way, all of which had been picked but a few days, and no more fit to be eaten than a green watermelon. At the same time most of the commission houses were receiving heavy consignments from further away places, some as far as two hundred miles or more, so that they were overflowing with them, and all in that same unripe condition, and no sale for them.

I estimate that more trees have been planted that are not yet bearing than were bearing a crop last fall, so that, in a short while there will be more than double the amount of this fruit to dump on the market than there was last season. Now it seems to me that we horticultural societies have a problem to solve in finding some way in which we can handle this fruit to better advantage. I believe it can be done in part only. There are so many conditions surrounding a well-developed, highly-colored, juicy, and real good Kieffer pear that would make it impossible to do more. What we want is to learn first what these conditions are, and then make use of as many of them as possible.

The first and most important of these is soil. Any of our soils will grow fine-looking and apparently well-developed Kieffer pears, but a very few of them will produce them of real good quality. I know of no fruit that is so much affected by the soil as this pear. I am not able to say just what elements of fertility the soil should contain to produce the best results. But I do know that a deep black soil—such as we call rich—that will produce fifty to seventy-five bushels of corn to the acre will not give the Kieffer pear any quality, and I also know that most any of our light-colored soils such as we call poor land (not always true, however,) will give more or less a good quality. My attention was first called to this point by the late Mr. Holman, of Springfield, Mo., who said that the Kieffer was almost our best pear. And yet

I don't think he had learned its most valuable qualities. I have been a close observer of the Kieffer ever since, and have had opportunity to test it from most of our Missouri soils, besides those of many other States, and am free to say I have never sampled one that could be called good that did not grow on such land as we call poor, or where the subsoil is red, such as is found in most of the Ozark region.

If the Kieffer pear is planted on such soil, and the trees are not allowed to bear too full, but the fruit is properly thinned at the proper time and picked when not quite ripe—and each specimen wrapped in paper and packed in barrels—bushel boxes are better—and stored in a cellar with a temperature of not more than 50° that will lower a little later to 40°, and allowed to remain there until toward the holidays, and then submitted to a temperature of about 60° for a few days, they will be ripe, well-colored, sweet, and juicy, and almost as good as a Bartlett.

Now if these pears, grown under favorable conditions, are so much improved by this treatment, of course those grown under other conditions would be improved in proportion under like treatment, besides the advantage of going on the market at a time when they are wanted, and would sell for a good price.

Unless something of this kind is adopted we may some day wish we had not planted so many Kieffers. On the other hand, if even a part of the growers adopt this or some similar plan we will find our market supplied with luscious, juicy Kieffer pears in midwinter and selling at a profit to the grower. Will those who are growing this pear take the hint?

Orchard Cultivation.

Press Bulletin Kansas Experiment Station.

There is no longer any question as to whether the orchard should be cultivated. Experience everywhere shows that cultivated orchards live longer, bear better, and are more profitable than uncultivated orchards. Many of the experiment stations of the best fruit-producing States have tried uncultivated orchards beside those that were cultivated and have collected opinions of the most observant fruit-growers of their sections, and the considerate verdict in almost every case is that cultivation is necessary for healthy trees and first-class fruit. The principal orchardists of the State have expressed themselves on orchard cultivation. Out of 272 reports made to the secretary of the State Horticultural Society, 130 advocate thorough cultivation till bearing time, and 130 urge continuous cultivation as long as it is possible to enter between the rows with horse and implement. Most of those advocating cultivation till bearing time only, live in the lower Kansas River district where the soil is very rich, deep, and moist and will produce fine crops of clover. The general practice in this district is to cultivate well till the trees are in full bearing and then seed to clover. West of Manhattan, clover does not succeed. Even if it should succeed it would not be profitable to sow it from the fact that all the moisture that falls in this region is required by the fruit-trees, and any crop whatsoever simply robs them of the moisture they should have. For this reason, then, clean and steady cultivation ought to be the rule for at least that part of the year including the dry season.

However, bare soil soon loses its humus and becomes infertile. This must be prevented. Here is one way of preventing it. Plow the orchard in the spring, cultivate both ways and keep all weeds down till September 1, at which time the soil will be in fine condition for a seed-bed. Sow rye at the rate of two bushels per acre. This will cover the ground well before winter, and therefore protect the ground from blowing or hard freezing during the winter. Let the rye stand till knee-high in the spring, then turn under and proceed with clean cultivation through the summer.

Deep cultivation is not essential nor advisable, but the cultivation should be frequent. Go over the ground after every rain, if possible, with the disk or the harrow to break the crust. This will give a mulch of loose earth two inches deep, which will greatly retard evaporation and therefore conserve the moisture for the use of the trees. This system of management has the following advantages:

1. It provides the soil with a good supply of organic matter (humus) which will keep it in good physical condition as well as prevent washing and blowing.
2. It provides a cover for the ground during winter, thus preventing the soil from blowing; it catches the snow, thereby moderating the temperature of the soil.
3. It provides for clean cultivation during the summer, the time when all the moisture that falls should be conserved for the use of the trees.
4. By ceasing cultivation and introducing a crop September 1, the trees are helped to ripen off their wood and prepare for winter.

These advantages are worthy of the con-

sideration of the orchardist. The plan has worked well in the orchards of this department, and it will without doubt operate as successfully in many other regions of the State.

It is a matter of grave doubt as to whether there is anything gained in the long run by cropping the land that has been planted to fruit-trees. Of course it pays while the crops are being gathered, but does it pay to have the orchard come into bearing on soil reduced in fertility? Will not the orchard during its bearing period have need of all the food elements that the soil contained at the start? Will not the productiveness of the orchard be reduced in the same proportion as the elements of fertility have been removed by previous crops? This will certainly be the case unless the removed elements are restored by means of fertilizers. Ground that supports an apple orchard for thirty successive years has no food to spare for corn crops. Either cling to the orchard and forego the corn crop or else depend upon the corn and abandon the orchard.

It is now the latter part of May. The soil is moist, and good growing conditions prevail all over the State. It is nip and tuck between crop and weeds on every side. With the farmer in the garden or the corn-field, the weeds grow apace in the orchard and often predominate. Once in control they soon fully possess the situation; and, as dry weather prevails later on, they will consume the water in the soil and leave none for the trees, which thereby starve for the time being. The only remedy is prevention. Do not allow the weeds to grow.

Planting Trees for Profit.

Editor Kansas Farmer:—While it is not in line with the boom to plant forest trees, and in past years many discouraging things have been found in the way of success, yet the fact comes to hand again and again that it can be done to advantage in all prairie States. On almost every farm are waste places fit only for such plantings; in corners near creeks, where the space is not suitable for plowing, trees would do well.

But what kinds are best? comes up every time for solution. In the eastern part of the State many do well; in the western less kinds do, but among them are the honey locust and black walnut. The yellow locust does well over a large range of the State, but it has been so infested with borers that it has been in bad repute for that reason. However, lately I had to use some extra-sized posts, and cut some yellow locusts for that purpose, and, to my surprise, not a trace was seen on the trees. They were 16 years old, over 9 inches in diameter after the bark was removed, and would make several good posts to a tree. The wood is nearly as hard as Osage hedge, and as lasting as a post. If that would be the case in other places, the yellow locust is the tree to plant for timber, as it is a fast-growing tree, entirely hardy, and adapts itself to almost any ground.

Some years ago I planted catalpa trees on a creek bank, where it could not be plowed, and I have a fine lot of trees there for posts. They had no care since planting (except to mow the weeds once) were planted four feet each way, and have made a clean, straight body, suitable for posts.

Scotch and Austrian pines are valuable trees almost anywhere in the eastern half of the State; the white pine is good and safe for most places, and the cedars can be grown anywhere, and in a few years grand groves can be had from them. They will be worth all they cost in the protection to the place from high winds, from the beauty they add to the place, and for a home for choice birds that help to reduce the insects that jeopardize the crops; and they make a place for timber for many uses on a farm, and finally we have the matured timber.

Among the trees little known is the southern cypress, a tree of the swamps, yet one of the most beautiful trees to adorn the home. It is at home on our dryest soils, and is one of the best growing trees, but the seed is hard to get to grow, and is not in the market. A. H. GIESA, Lawrence, Kans.

Excursion to Cleveland, O.

One fare for the round trip via Nickel Plate Road, on June 25th and 26th. Tickets good returning to and including June 29th, 1899. Chicago depot, Van Buren St. and Pacific Ave. Address, General Agent, 111 Adams St., Chicago. (11)

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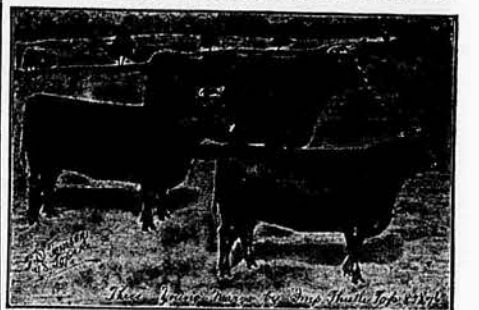
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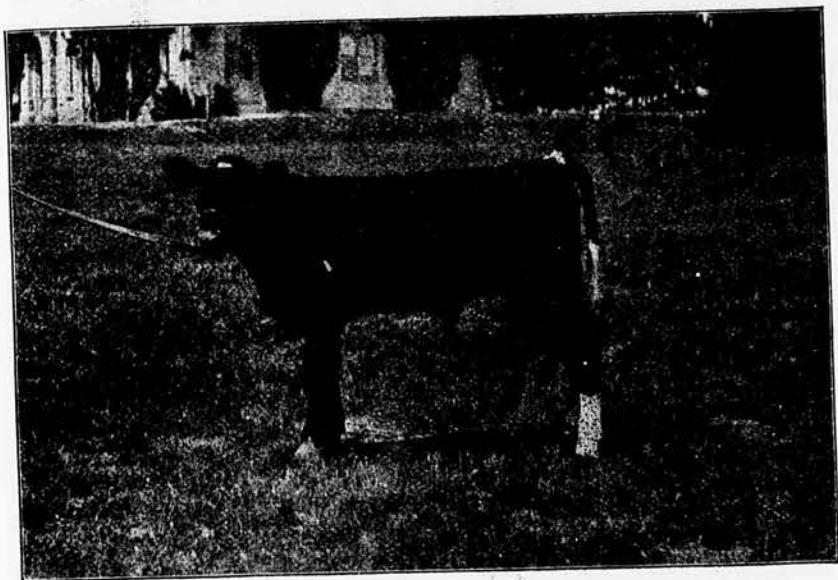
In the Dairy.

Conducted by D. H. OTIS, Assistant in Dairying, Kansas Experiment Station, Manhattan, Kans., to whom all correspondence with this department should be addressed.

What Skim-Milk Will Do.

Last week we published a press bulletin from the agricultural college on "Skim-milk Calves." This week we publish some calf notes gleaned from experiments still in progress. The illustrations here given are specimens of what skim-milk will do when properly handled. These calves were put under experiment the 1st of April.

Zenith, born December 20, 1898, is fed on skim-milk from the hand separator, with all the Kaffir-corn meal he will eat. The dam of this calf was bred before purchased by the college and we do not know

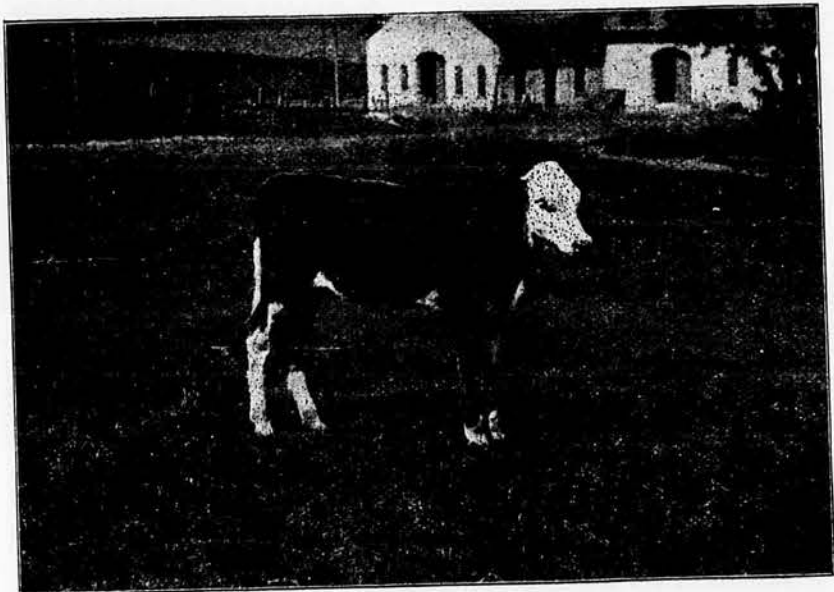


ZENITH

its breeding. He now weighs 297 pounds, and since placed under experiment April 1, has been gaining at the rate of 2.07 pounds per day. This rate of gain is on the increase. From April 22 to May 20, he made a gain of 16 pounds each week, or 2.28 pounds per day. From May 20 to 27 (the last weighing), he gained 21 pounds, or 3 pounds per day. We are pushing this calf as fast as we can, every pound of gain being that much nearer the goal of a well-rounded fattened steer.

at another is very apt to cause scours and stunt the growth of the calf.

The stomach of the calf is delicate and sensitive, and any change of feed should be made gradually. Do not change from whole milk to skim-milk faster than a pound a day, allowing from ten days to two weeks for the change. Before turning on pasture in the spring, it is better to feed a little green feed and gradually increase the amount until the limit of the calf is reached. Otherwise the calf may



YAZELDA.

Yazelda, born February 17, 1899, receives sterilized creamery skim-milk and Kaffir-corn meal for its ration. This heifer calf is a half Guernsey and weighs 227 pounds. Her gain since the 1st of April has been 1.64 pounds per day. This calf is being developed for a dairy cow, and we do not want her to gain much more than a pound and a half per day. What we want to develop is bone and muscle, including a large paunch, and little or no fat. We are watching her and as soon as she begins to lay on too much fat, her ration of Kaffir-corn meal will be changed to a mixture of bran, oats, and linseed-meal to give more protein.

These illustrations represent what the agricultural college is doing and what every farmer in Kansas can do with skim-milk. It must be fed intelligently, however, in right quantities and at proper temperature. It must also be kept sweet. If the skim-milk begins to sour by Monday morning, we find that our calves do not like it and sometimes refuse to eat. If they do eat it, they are frequently attacked with scours, which causes a check in their

growth. Calf-feeding, like any other business, requires intelligence and good judgment. "By their fruits ye shall know them." D. H. O.

Calf Notes.

Sterilized skim-milk is good for scours. The calves at the agricultural college that receive sterilized milk are less subject to scours and recover more readily when attacked. The heating of the milk seems to produce chemical changes that help to prevent scours and at the same time enable the feeder to keep the milk in good, sweet condition. Milk delivered at the creamery contains large numbers of lactic acid germs. Unless these are destroyed by sterilizing, the skim-milk will sour in a few hours. When sterilized and cooled to the temperature of well-water, skim-milk may be kept sweet from thirty-six to forty-eight hours. Feeding sweet milk at one meal and sour

able to raise good thrifty calves on skim-milk. At the college we find that calves from 3 to 4 months old will not stand more than eighteen to twenty pounds daily per head, from 7 to 8 weeks old, fourteen to sixteen pounds, and 3 to 5 weeks old, ten to thirteen pounds. (One quart equals two pounds.)

Kaffir-corn meal is proving an excellent feed for young calves at the agricultural college. It is constipating and aids materially in keeping calves from scouring. They commence to eat the meal when 10 days to 2 weeks old. At first a little of the meal is placed in their mouths after drinking their milk, and in a short time they go to the feed-boxes and eat with a relish. Our herd of thirteen calves, averaging 8 weeks old, consumes two pounds daily per head.

Never put corn, Kaffir-corn meal, or any other grain in the milk for calves. The starch of corn has to be changed to grape sugar before it is digestible. This change only takes place in the presence of an alkali, and is done chiefly by the saliva of the mouth. When corn is gulped down with the milk the starch is not acted upon by the acids of the stomach, but remains unchanged until it comes in contact with the alkaline secretions of the intestines. With hogs the stomach is small and the intestines long. This allows starchy matter to be digested in the intestines. The opposite is true with calves, the stomach being large and the intestines short. Unless the starchy matter is largely digested by the saliva of the mouth complete digestion will not take place in the intestines and the calf scours.

Flaxseed-meal or Blachford's meal made into a jelly or gruel are good to mix with skim-milk to take the place of butter fat. Oil-meal is frequently used for this purpose, but, like skim-milk, it has a large

amount of fat removed and is not as good as meal with the fat in.

Calves like fresh water. Any arrangement like the Dewey hog-waterer, that will keep clean, fresh water before them all the time, is the best way to supply it. Our calves drink between seven and eight pounds daily per head. D. H. O.

The Importance of Protein for Dairy Cows.

By J. A. Reh, dairy student 1899, Kansas Agricultural College.

Every intelligent dairyman and farmer should know what protein is and its relation to the growth of animals. The term "protein" is applied to the albuminoids of a feed. This includes vegetable albumin and fibrin, as well as other substances which resemble in composition the albuminoids of the animal body. All of the albuminoids contain nitrogen, and this is the chief constituent of protein. In other words, protein includes all materials in feeds which contain nitrogen, and it is absolutely indispensable to all animals. It enters into the composition of milk, blood, muscle, hair, and the brain and nerves, and is necessary in the formation of these, and no other substance can take its place. Protein may take the place of the carbohydrates and fat when they are deficient, but the latter can not take the place of protein. Now, if a dairy cow is only fed enough protein to sustain life, she will have nothing from which to make milk, since she can not make something out of nothing. The reason why she must have a certain amount of protein daily is, that she must put a certain proportion of protein in her milk—that is, the casein, or cheesy part. The cow can not change the proportions of her milk to any extent. The cow and not the feed governs the proportion of the solids in the milk. She can not make fat without making a due proportion of casein. So, if the protein

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WEST HAVEN, VT., April 29, 1899.
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is deficient the milk yield will also be deficient. She must make a balanced product. Nature provided this precaution to protect the calf from sudden changes.

Every farmer knows that good pasture produces rapid growth, good gains, and abundant milk yields. As soon as the grass is gone and the cows put on dry feed they dry up. Now, let us look at this matter and see where the trouble is. Pasture grass furnishes nutriment in the proportion of three pounds of protein, twelve pounds of carbohydrates, and one-half pound of fat, per hundred pounds, and here is a ration that a great many of the Kansas farmers feed through the winter:

	Protein.	Carbo- hydrates.	Fat.
Corn-fodder (husked), 20 lbs.	4	6.64	.14
Millet hay, 10 lbs.45	5.17	.14
Corn, 15 lbs.	1.17	10.00	.65
Total	2.02	21.81	.93
Actual amount needed	2.50	12.50	.40

Any one can see that there is too much carbohydrates and fat and not enough protein. The cow will give milk for a short time but she will continue to grow fatter all the time until she is dry; but if a proper ration was fed she would give milk for a long time and nearly as much as when she was on pasture. Most of our farmers do not know the value of alfalfa hay as a feed for dairy cows. They would appreciate it more if they were aware of the fact that it is nearly equal to bran, weight for weight. As an illustration of what can be done with it. I will give the following ration and allow the reader to compare it with the one above:

	Protein.	Carbo- hydrates.	Fat.
Alfalfa hay, 20 lbs.	2.12	7.46	.28
Corn-fodder (husked), 10 lbs.20	3.32	.06
Corn, 3 lbs.23	2.00	.13
Total	2.55	12.78	.47

This is not an ideal ration, though it is far better than most of our farmers feed.

Kansas City Market Reviewed.

Receipts of cattle last week, compared with the week previous, show a shortage of about 100 head, with no material difference on the best heavy cattle; while the best light and handy weight cattle show an increase in value of 10 to 15 cents per hundredweight. On this class we look for a good demand with strong to higher prices. Our best stockers and feeders sold strong the first of the week but closed weak to lower on the common grades. As the country orders become less numerous, we look for much lower prices on all classes of stock cattle. Fat cows and heifers sold steady this week, while stock cows and canners are around 25 cents per hundredweight lower, and real calves 75 cents per hundredweight lower.

The week's run of hogs was very liberal, larger by nearly 14,000 head than the previous week. Tuesday being a legal holiday, followed by yellow fever reports in the South and a consequent break in all classes of provisions from 12½ to 30 cents which made packers very bearish, and breaking prices, diminished this week's receipts by over 17,000 head. Still, values are practically in the same notch as last Friday, the bulk of hogs ranging from \$3.55 to \$3.70. Heavy receipts are predicted this month, and if they arrive, will keep prices from advancing.

Nearly 3,000 more sheep arrived last week than the week previous, with muttons selling 25 to 50 cents lower; lambs, 50 cents to \$1 lower. Few grass stockers coming, mixed southern Missouri bringing from 3 to 3½ cents; Westerns, 3½ to 4 cents.

How Louisiana Was Purchased.

On April 18, 1802, President Jefferson wrote to Livingston, our minister to France, that there was one spot on the face of the earth so important to the United States that whoever held it was for that reason naturally and forever our enemy, and that spot was New Orleans. Again he wrote to Livingston: "The day that France takes possession of New Orleans fixes the sentence which is to restrain her forever within her low-water mark. It seals the union of two nations which, in conjunction, can maintain exclusive possession of the ocean. From that moment we must marry ourselves to the British fleet and nation." These were the words of one of the most pronounced lovers of France and haters of all things British in the country. He determined to buy the island of New Orleans and the Floridas, and instructed Livingston accordingly; in addition, he bade our minister negotiate also for all of Louisiana north of the Arkansas River.

Bonaparte placed the negotiation in the hands of Marbois, his minister of finance, with strict orders not to sell for less than 50,000,000 francs. That astute minister promptly set the price of Louisiana at 100,000,000 francs, and then compromised on 80,000,000 francs.

The people were astonished. They had asked for an island, a strip of sand-bank,

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and a peninsula, and were given an empire.—From an article entitled "The Acquisition of Louisiana," in Self Culture for June.

Old Crusty—"You ask for my daughter? Why, young man, at your present salary you could not even dress her." Suitor—"Oh, yes, sir! I could keep her in gloves." Old Crusty—"Gloves! Do you mean to insinuate that my daughter would only wear gloves?" Suitor—"Pardon me, sir; I only asked for her hand."—Brooklyn Life.

"I have just learned," she said, with a perceptible tinge of asperity, "that I am the ninth girl to whom you have been engaged." "Well," he suavely replied, "that ought to make you glad." "Glad!" she exclaimed. "I'd like to know why?" "Don't you know," he answered, "that there's luck in odd numbers?"—Chicago Daily News.

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" St. Joseph 8:05 p. m.
" Atchison 11:10 p. m.
Ar. Omaha 5:50 a. m.
Lv. Omaha 6:10 a. m. via C., St. P., M. & O.
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MARKET REPORTS.

Kansas City Live Stock.

Kansas City, June 5.—Cattle—Receipts since Saturday, 2,794; calves, 128; shipped Saturday, 248 cattle; 19 calves. Fat cattle were steady and stockers 10 to 15 cents lower. The following are representative sales:

DRESSED BEEF AND SHIPPING STEERS.			
No.	Ave. Price.	No.	Ave. Price.
28.....	1,377 \$5.25	22.....	1,383 \$5.15
19.....	1,449 5.05	18.....	1,353 5.00
88.....	1,006 4.80	2.....	930 4.75
23.....	981 4.70	2.....	800 4.50

WESTERN STEERS.			
42.....	1,097 \$4.95	36.....	1,093 \$4.85
23.....	1,072 4.85	39 Ariz.....	1,121 4.80
66.....	1,085 4.77½	5 Ariz.....	1,328 4.55
2.....	900 4.00	50.....	886 3.70

NATIVE HEIFERS.			
25.....	635 \$5.00	8.....	1,123 \$4.00
8.....	735 4.80	6 s&h.....	983 4.75
1.....	460 4.70	5.....	884 4.65
18.....	742 4.40	1.....	900 4.15

NATIVE COWS.			
2.....	1,248 \$4.25	1.....	1,260 \$4.15
1.....	1,240 4.10	1.....	1,180 3.90
1.....	1,280 3.85	1.....	1,180 3.75
2.....	770 2.72	2.....	920 2.50

NATIVE FEEDERS.			
5.....	1,006 \$4.70	1.....	940 \$3.85
NATIVE STOCKERS.			
2.....	600 \$5.20	1.....	730 \$5.00
13.....	617 4.90	2.....	405 4.75
13.....	708 4.60	1.....	650 4.50
1.....	500 3.65	3.....	895 3.65

Hogs—Receipts since Saturday, 7,143; shipped Saturday, 818. The market opened steady and closed weak. The following are representative sales:

64.....	281 \$3.75	74.....	260 \$3.72½	67.....	264 \$3.72½
50.....	284 3.70	75.....	255 3.70	74.....	249 3.70
28.....	174 3.70	79.....	273 3.70	64.....	305 3.67½
66.....	236 3.67½	68.....	235 3.67½	66.....	271 3.65
78.....	253 3.65	55.....	246 3.65	63.....	277 3.65
74.....	268 3.62½	31.....	156 3.62½	64.....	245 3.62½
132.....	220 3.60	61.....	220 3.60	54.....	194 3.60
78.....	202 3.57½	69.....	220 3.57½	69.....	208 3.57½
72.....	184 3.55	139.....	100 3.55	50.....	220 3.55
94.....	170 3.52½	68.....	154 3.52½	69.....	160 3.52½
34.....	181 3.50	86.....	212 3.50	75.....	211 3.50
12.....	141 3.47½	8.....	146 3.45	10.....	147 3.45
32.....	132 3.45	10.....	142 3.45	5.....	136 3.42½
1.....	440 3.40	108.....	172 3.40	12.....	134 3.40
12.....	139 3.40	6.....	141 3.37½	7.....	123 3.37½
1.....	400 3.25	1.....	450 3.25	1.....	290 3.25
2.....	315 3.25	4.....	282 3.20	3.....	400 3.20
17.....	105 3.10	1.....	200 3.00	2.....	320 3.00

Sheep—Receipts since Saturday, 5,937; shipped Saturday, 1,640. The market was 10 to 15c lower. The following are representative sales:

128 spg. lbs.....	40 \$6.00	19 sw. spg.....	54 \$5.50
504 Ariz.....	89 4.60	276 Texas.....	77 4.25
623 Texas.....	71 4.10	34 spg. lbs.....	42 3.75
23 old ewes.....	109 3.60	145 W. stk.....	60 3.25

Chicago Live Stock.

Chicago, June 5.—Cattle—Receipts, 19,000; market weak to 10c lower; beefs, \$4.30@5.05; cows and heifers, \$2.25@5.00; Texas steers, not quoted; stockers and feeders, \$3.80@5.00.

Hogs—Receipts, 40,000; market for light hogs strong to a shade higher, others 2½c lower; mixed and butchers, \$3.60@3.82½; good heavy, \$3.45@3.80; rough heavy, \$3.45@3.60; light, \$3.60@3.85.

Sheep—Receipts, 19,000; market 10 to 15c lower; sheep, \$2.75@3.25; lambs, \$3.75@4.30.

St. Louis Live Stock.

St. Louis, June 5.—Cattle—Receipts, 3,500; market steady for natives, easy for Texans; beef steers, \$4.00@5.50; stockers and feeders, \$3.50@4.85; cows and heifers, \$2.50@4.90; Texas and Indian steers, \$3.75@4.85; cows and heifers, \$2.30@4.25.

Hogs—Receipts, 3,000; market 5c lower; pigs and lights, \$3.60@3.70; packers, \$3.65@3.75; butchers, \$3.70@3.80.

Sheep—Receipts, 5,500; market slow; natives, \$3.50@5.40; lambs, \$5.00@7.50.

Chicago Grain and Provisions.

	June 5.	Opened	High'st	Lowest	Closing
Wht—June.....	77½	77½	77½	76	76
July.....	78½	78½	78½	76½	76½
Sept.....	79½	79½	79½	77½	77½
Corn—June.....	33½	33½	33½	33½	33½
July.....	34½	34½	34½	33½	33½
Sept.....	34½	34½	34½	33½	33½
Oats—June.....	23½	23½	23½	23	23
July.....	23½	23½	23½	20½	20½
Sept.....	20½	20½	20½	20½	20½
Pork—June.....	8 20	8 20	8 15	8 20	8 12½
July.....	8 20	8 20	8 15	8 20	8 12½
Sept.....	8 35	8 35	8 30	8 35	8 12½
Lard—June.....	5 02½	5 02½	5 00	4 97½	4 97½
July.....	5 02½	5 02½	5 00	5 02½	5 02½
Sept.....	5 15	5 15	5 12½	5 15	5 15
Ribs—June.....	4 05	4 05	4 05	4 05	4 05
July.....	4 05	4 05	4 05	4 05	4 05
Sept.....	4 77½	4 77½	4 75	4 77½	4 77½

Kansas City Grain.

Kansas City, June 5.—Wheat—Receipts here to-day were 196 cars; a year ago, 169 cars; a year ago, 99 cars. Sales by sample on track: Hard, No. 2, 69½@71c; No. 3 hard, 66½@68½c; No. 4 hard, 63½@68½c. Soft, No. 2, nominally 75@77c; No. 3 red, 73c; No. 4 red, 62@64½c. Spring, No. 2, nominally 68@70c; No. 3 spring, nominally 65@68c; rejected, 65½c.

Corn—Receipts here to-day were 63 cars; a year ago, 113 cars; a year ago, 116 cars. Sales by sample on track: Mixed, No. 2, 24½@25c; No. 3 mixed, 23½@24½c. White, No. 2, 27c; No. 3 white, 26c; No. 4 white, nominally 25@25½c.

Rye—No. 2, nominally 58c; No. 3, nominally 57c; No. 4, nominally 56c.

Hay—Receipts here to-day were 41 cars; a year ago, 46 cars; a year ago, 33 cars. Quotations are: Choice prairie, \$7.25@7.50; No. 1, \$6.50@7.25. Timothy, choice, \$8.50@9.00. Clover, pure, \$6.25@7.00. Alfalfa, \$7.00@8.00.

Chicago Cash Grain.

Chicago, June 5.—Wheat—Cash, No. 2 red, 79½@80c; No. 3 red, 78½@79½c; No. 2 hard winter, 74½@75c; No. 3 hard winter, 73½@74c; No. 1 northern spring, 77½@78c; No. 2 northern spring, 76½@77½c; No. 3 northern spring, 72½@73½c.

Corn—Cash, No. 2, 33½c; No. 3, 32½@33½c.

Oats—Cash, No. 2, 25c; No. 3, 24½c.

St. Louis Cash Grain.

St. Louis, June 5.—Wheat—Cash, No. 2 red, elevator, 76c; track, 77c; No. 2 hard, 74c. Corn—Cash, No. 2, 33c; track, 33c.

Oats—Cash, No. 2, 25c; track, 25@25½c; No. 2 white, 23@23½c.

Kansas City Produce.

Kansas City, June 5.—Eggs—Strictly fresh, 11c per doz.

Butter—Extra fancy separator, 16c; firsts, 14½c; seconds, 11c; dairy fancy, 13c; country roll, 11@12c; store packed, 10½c; packing stock, 10c.

Poultry—Hens, 7½c; broilers, 20c; roosters, 20c each; ducks, 5c; young ducks, 15c; geese, 5c; turkeys, hens, 7c; young toms, 6c; old toms, 6c; pigeons, \$1.00 per doz.

Berries—Strawberries, choice to fancy, \$1.25@1.50 per 24-box crate; poor to fair, 75c@1.00.

Blackberries, Arkansas, \$1.50@2.00 per crate.

Vegetables—Lettuce, home grown, 15c@25c per bu. Pieplant, 10c per doz. bunches. Spinach, home grown, 15c@25c per bu. Asparagus, home grown, 20@30c per doz. bunches. Radishes, 2½c@5c per doz. bunches.

Potatoes—Home grown, 35@40c per bu.

THE STRAY LIST.

FOR WEEK ENDING MAY 25, 1899.

Bourbon County—H. Frankenburg, Clerk.

MARE—Taken up by G. O. Cowan, in Marion tp., south of Uniontown, one flea-bitten gray mare, 15 hands high, weight about 1,000 pounds, and about 12 years old; valued at \$15.

Comanche County—J. E. Harbaugh, Clerk.

COW—Taken up in Logan tp., one red and white cow, weight 700 pounds, A on right hip, G on left hip, M on left side, crop off left ear, half under-crop right ear; valued at \$20.

Cherokee County—S. W. Swinney, Clerk.

HORSE—Taken up by Mrs. Malinda Turner, one and one-half miles west and one mile south of Baxter Springs, April 25, 1899, one brown horse 8 years old, and branded N X.

Clay County—J. G. Cowell, Clerk.

MARE—Taken up by Ed Braden, in Sherman tp., April 28, 1899, one bay mare, 16 hands high, barb wire cut on left fore foot, rear left foot white, star in forehead; valued at \$35.

FOR WEEK ENDING JUNE 1, 1899.

Stanton County—C. E. Van Meter, Clerk.

MARE—Taken up by J. G. Adams, in Stanton tp., three miles south and six miles east of Johnson City, May 5, 1899, one dapple-bay mare, 15 hands high, with black mane and tail and white spot in forehead, branded with diamond on left shoulder; valued at \$30.

Cherokee County—S. W. Swinney, Clerk.

MARE—Taken up by H. H. Michael, in Shawnee tp., April 28, 1899, one bay mare, 6 years old, 15 hands high, silt in left ear; valued at \$12.50.

HORSE—Taken up by C. W. Raymer, in Shawnee tp., May 20, 1899, one bay horse, 12 years old, 15 hands high, star in forehead, hind feet white from pasterns down; valued at \$15.

FOR WEEK ENDING JUNE 8, 1899.

Cloud County—A. R. Moore, Clerk.

MARE—Taken up by Wm. Barland, in Shirley tp. (P. O. St. Joseph), April 27, 1899, one bay mare about 4 years old, weight about 900 pounds, some white on left front foot and white star in forehead; valued at \$15.

Allen County—C. A. Fronk, Clerk.

COW—Taken up by E. E. Miner, in Marmaton tp. (P. O. Moran), April 29, 1899, one dark red cow, about 8 years old, left ear cropped and silt off of lower part of right ear, no horns.

Linn County—C. O. Hoag, Clerk.

STEER—Taken up by J. N. Hoover, in Stanton tp. (P. O. Mantey), May 3, 1899, one black steer, 1 year old, with horns, no marks or brands; valued at \$12.

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Is a cooler season than that of the Middle and Eastern States or the Atlantic Coast.

Take your outing there this year. Reduced rates, with choice of return routes and long limit of tickets, will be made by the SANTA FE ROUTE, at the time of the N. E. A. Convention at Los Angeles in July.

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for you or for anybody who has wool to consign, is the one which has the best facilities for handling wool. The best, largest and lightest lofts; the best light for properly displaying and showing wool; the largest stocks for attracting the biggest buyers and the best reputation for business ability and honesty. We are

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and charge at the low rate of 5 per cent. per annum for the use of the money. We supply free sacks and sewing twine to all parties who ship to us. We mail our Circular Letter and Wool Quotations to all who ask for it. Tells all about the prices of wool and the market conditions. Address,

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WOOL WANTED!

500,000 Pounds of Wool,

For which we will pay the highest market price in cash. Send us sample, giving number of fleeces. Place your name on sample, and on receipt of same we will quote you prices. For small lots you can send sample by mail. Address Oakland, Kans.; or you may ship direct to us and we will allow you all it is worth. For large clips send three or four fleeces by freight or express. We will furnish sacks or wool twine if desired. Address **TOPEKA WOOLEN MILL, Topeka, Kans.**

Higgins' Hope Herd Registered Poland-China Hogs.

I am now offering a Choice Lot of Glits and Sows bred to my Herd Boar, Eberley's Model 20854. If you are looking for the right kind, drop me a line and get my list before buying.

J. W. Higgins, Jr., Hope, Kans.

VALLEY GROVE SHORT-HORNS.

THE SCOTCH BRED BULLS

**Lord Mayor 112727 and
Laird of Linwood 127149**

HEAD OF THE HERD.

LORD MAYOR was by the Baron Victor bull Baron Lavender 2d, out of Imp. Lady of the Meadow and is one of the greatest breeding bulls of the age. Laird of Linwood was by Galahad out of 11th Linwood Golden Drop. **Lord Mayor** and **Laird of Linwood** are by Galahad out of 11th Linwood Golden Drop. Inspection invited. Correspondence solicited. A few young bulls sired by Lord Mayor for sale.

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Have for sale at all times, singly or in car lots... **Registered Herefords and Shorthorns.**

Cross-bred Hereford Short-horns and grades of other breeds. Bulls and females of all ages

Stock on Sale at Stock Yards Sale Barn, also at Farm Adjoining City.

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Are the Finest Equipped, Most Modern in Construction and afford the Best Facilities for the handling of Live Stock of any in the World. The Kansas City Market, owing to its Central Location, its Immense Railroad System and its Financial Resources, offers greater advantages than any other. It is the Largest Stocker and Feeder Market in the World, while buyers for the great packing houses and export trade make Kansas City a market second to no other for every class of live stock.

	Cattle and Calves.	Hogs.	Sheep.
Official Receipts for 1898	1,846,233	3,672,909	980,303
Sold in Kansas City 1898	1,757,163	3,596,828	815,580

C. F. MORSE, Vice Pres. and Gen. Mgr. **E. E. RICHARDSON,** Secy and Treas. **H. P. CHILD,** Asst. Gen. Mgr. **EUGENE RUST,** Traffic Manager.

THE SHAWNEE FIRE INSURANCE COMPANY,

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Insures Against Fire, Lightning, Windstorms, Cyclones and Tornadoes.

The only company in Kansas with a paid-up capital of \$100,000. It writes more business in Kansas than any other company. It has paid losses amounting to \$493,266.63. Call on your home agent or write the company.

The Apiary.

Conducted by A. H. DUFF, Larned, Kas., to whom inquiries relating to this department should be addressed.

Early and Late Spring Management.

The season's crop of honey may be greatly enlarged by a little timely attention to the bees, from the time spring fairly opens up to the time the honey harvest begins. One would scarcely believe the difference we may thus make by giving bees a little assistance in the way of food during this period. Colonies should have abundance of honey in the springtime, and not merely enough to exist on. Every colony that does not have an abundance of reserve stores will be more or less crippled at the beginning of the honey flow. There is nothing to which more importance should be attached than to having a reserve store in the hive at all times during this period, in order that the bees may at no time imagine a shortage. Bees are usually allowed about 25 pounds of honey per colony to winter on, and for spring little or nothing. There are but few localities where bees gather honey enough on which to properly live during the months of April and May, and these are the two months when they must build up and get in shape for the honey harvest. Twenty-five pounds of honey for a colony to begin spring work on, is not too much; but the half of this, and even less, is usually found in most of them. A good strong colony will consume this amount of honey before the first of May. Then just in the midst of the important period, when they should be in the best possible condition, they are out of provisions and the result is that, if they do not starve outright, all rearing of brood is at once stopped, and as long as they are left in this condition there incurs a loss of thousands of bees daily. Bees produced at this time are the bone and sinew of the principal honey harvest, and at no time of year could such scarcity of reserve stores occasion equal loss. Bees may have a scanty supply of provisions, sufficient to keep life in them, which may also answer to keep them breeding moderately; but they are largely governed in this respect by their condition, the principal help in brood-rearing being inexhaustible supplies. Bees breed to their utmost capacity only when they are engaged in gathering honey from the fields. It is in only a moderate degree that they breed otherwise, even in the breeding season. To get the best results in strong colonies we can imitate nature and feed them during intervals when they are not gathering honey from the fields. From the beginning of spring up to the usual honey flow or the principal honey harvest, which in most localities does not occur until two months later, there are periods when blossoms open and bees gather some honey, principally from fruit blossoms. Bees do not gather large stores from fruit bloom, but during its period they generally get a good living from it, and at such times breed rapidly. It frequently happens that at the end of this they have a large amount of brood and but little honey to feed it, and it may be some days or even weeks before other blossoms open. Hence starvation or great damage will result if they do not have a good reserve to fall back on; and even if they do have a reserve, brood-rearing will be checked to some extent as soon as the flow of nectar ceases. To keep up the rate of brood-rearing we can resort to feeding. Feeding for brood-rearing, or "stimulative feeding," as it is called, is done in this way: Each colony is fed a small amount of sirup daily, imitating a naturally flow of honey. When thus fed they will begin to breed; the queen will respond by laying eggs rapidly, and will continue to do so as long as the feeding is kept up. It is only necessary to feed in this manner when the bees are idle and can not gather honey. As soon as it is discovered that they are getting honey from flowers the feeding may cease, only to begin again when the natural flow stops. Bees treated in this manner, if they have a good fertile queen, will never fail to build up rapidly and become strong in numbers, and by the time the summer honey flow sets in they are in a condition to store a large crop of surplus honey. A colony thus treated is worth more and will store more honey than a half dozen others that are let go-as-you-please.

With movable frame hives we can assist matters to some extent in the brood chamber or hive. Bees usually arrange their brood nest properly, but in some cases they locate at one side of the hive and fill the outside frames with brood, thus, the brood

nest will be on one side of the hive and the honey all on the other side. It is a very easy matter to adjust the combs to their proper places and place the brood combs in the center of the hive. This will insure rapid building up of colonies, especially those of moderate strength.

Putting on surplus honey boxes, just before or at the time of the beginning of the honey season, is of considerable importance. If we have brought our bees up to a high state of perfection in the way of strength, they may very soon take the swarming fever if we are not careful, and all our plans for a honey crop fail. We should at no time allow them to be cramped for room. It is sometimes useless to put on surplus boxes until the beginning of the honey flow, yet if the bees need the room it must be furnished or swarming will result. Strong colonies prevented from swarming, is the key to large honey crops, and this must be kept in view from first to last. Excessive swarming is a failure in every way you take it, but a limited amount of swarming is no detriment. A limited amount of swarming will not curtail the size of the honey crop, but it must be regulated. Very strong colonies may swarm, and the two colonies thus produced may store more honey than if kept in one hive. When such colonies incline to persist in swarming it is better to let them do so. This privilege should only be given to extremely strong stocks and those that are not overcrowded with bees should be prevented. Colonies which cast a swarm will also swarm again in about eight days if allowed to do so. In every case this should be prevented by removing the queen cells all but one, this one being left to supply the colony with a queen. Surplus boxes of whatever nature used should all be in readiness to attach to the hives at the beginning of the honey season. In this kind of work there is nothing that can wait. It is simply to be put there at the right time or it is lost, and a few days thus neglected would have paid for all the proper fixtures for the season. Adopt a system of management and work in that direction with as little change as possible, as radical changes will not prove profitable. If an increase of colonies is desired as well as a lighter honey crop, I would advise natural swarming to the extent desired. Dividing bees for increase, unless we are raising queens and building up colonies for nuclei merely, I consider a poor plan of increase. Bees can not be divided artificially as they divide themselves, and in no case do they give as good results.

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OUR PRICES ARE LOWER THAN ANY OTHERS.

ANY GAUGE FROM 8 TO 19

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The greatest amount of power procurable from the least amount of fuel, with the least attention to details, result from using the

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This is true in each case, whether you are threshing, drilling wells, running a sawmill, grinding feed, cutting fodder or ensilage or anything else. They are Semi-Portable, Portable and Traction, either simple or compound. They range from 8 to 20 horse-power. The traction engines are remarkable for large traction power, easy steaming, fast travel, great strength, simplicity and durability. Boilers made of plate of 60,000 lbs. tensile strength. Fire boxes surrounded with water. We make also Threshers, Horse Powers and Sawmills. Illustrated catalogue sent free—fully describes all.

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can not be had, but you can save the jobbers' and retailers' profit by buying direct from us. We sell you on only one small margin of profit.

Buggies for \$26.
Surreys, Sewing Machines and Harness we will sell you at manufacturers' prices. Send for our handsome catalogue—it's free.

CRAWFORDSVILLE CARRIAGE AND HARNESS CO.
14 Main St.,
Crawfordsville,
Indiana.

Young Girls Fading Away.

Symptoms that seem like consumption; a lack of blood; friends feared one girl would fall dead on the street; restored to health by a sensible woman's suggestion.

Many girls of sixteen years seem to have consumption, although they have it not.

Their anxious parents and friends watch them slowly fade away.

A death-like pallor, transparent complexion and listlessness are signs of this condition.

The body lacks blood.

Mrs. John Tansey knows the meaning of these symptoms, and the cure.

She lives at 130 Baker Street, Detroit, Mich.

Her advice to mothers has been of great value to her neighbors. She tells the story to help others who are at a distance.

She said:

"When my daughter was sixteen years old she began to waste away.

"Had I not known there was no taint of consumption in the family I would have believed her lungs were affected.

"She grew thinner and thinner every day. She lacked only the hacking cough to show all the outward signs of consumption.

"Our doctor called the disease by an odd name, which I learned meant simply weak blood.

"No treatment seemed to do her any good.

"She was fading away before our eyes.

"I was induced to try Dr. Williams' Pink Pills for Pale People, and the change they made was almost magical.

"Before she had taken half a box there was a great improvement in her looks, appetite and weight.

"She gained strength rapidly. Soon she was in perfect health.

"Since then I have kept Dr. Williams' Pink Pills for Pale People in the house always and have done much good with them.

"One example:

"There is a young girl friend of my daughter who seemed almost transparent.

"She was white and very thin. We were afraid she would fall dead in the street when she went out.

"I begged her to take Dr. Williams' Pink Pills for Pale People, and finally induced her to try them. They helped her wonderfully, probably saved her life and restored her to perfect health. Now she is recommending them to other young women.

"I earnestly advise mothers with growing daughters to keep Dr. Williams' Pink Pills always on hand as a household remedy."

Many women's lives are miserable because such symptoms as Mrs. Tansey's daughter showed were neglected while they were developing into womanhood. During that period of rapid development the blood needs the highest degree of strength to repair the tissues that are rapidly wasted.

These needed elements are supplied by Dr. Williams' Pink Pills for Pale People. The vegetable ingredients of these pills act like magic in restoring strength to the muscles and roses to the cheeks of growing girls or adults weakened by overwork.

All druggists sell Dr. Williams' Pink Pills for Pale People. They cost 50 cents a box; six boxes \$2.50.

KEYSTONE QUICK HAYING MACHINES.

Keystone Side-Delivery Rake
Means "Quick Haying, Quality Hay." Turns the hay completely and leaves it in a light, loose windrow ready for loader. Its use means air-cured, not sun bleached hay. Better than a Sully Rake and saves use of tedder. Takes up no trash, that means clean hay.

Keystone Hay Loader.
Loads the hay from the windrow or cock, or direct from the ground if the hay is heavy. Takes the hay up clean but takes up no manure, rubbish, etc. It makes haying quick and easy. In showery weather it often saves enough to pay for itself in one day. Loads a wagon in 5 minutes.

Keystone Three Feed Hay Press.
Horses move in a full circle. Each revolution moves the plunger three times—one more feed than any other press made. Requires no more men but increases capacity beyond comparison.

MADE ENTIRELY OF STEEL AND IRON. Horse power only. Mounted on steel wheels, and stands on the wheels when operating. Write for our special circular, fully describing these machines.

KEYSTONE MANUFACTURING CO., 43 RIVER ST., STERLING, ILL.



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CANDY CATHARTIC
Cascarets
REGULATE THE LIVER

He Hated Long Prayers.

"It happened," said the colonel, "that there were two colored preachers inhabiting cells in the penitentiary at Frankfort at the same time. If I remember aright, both were sentenced for polygamy, but old Sam was a Methodist parson, while old Jake was of the Baptist faith. It seems that Sam had done something to greatly offend the warden, and the punishment decided on was an old-fashioned lashing. Some weeks after the affair came off Rev. Sam, whom I had known from boyhood, was telling me about it.

"I didn't mind de whippin' so much, Mars Jack, ef it hadn't been for de way old Jake acted. You see, de warden he said to me: 'Sam, I'se gwine to whip you, and 'low de whippin' will do you a whole heap uv good. I'se gwine to let old Jake pray fer you, and de blows will continue to fall on your black hide while Jake's pra'r is a goin' on. When he comes to a final stop, den de punishment will likewise end."

"Land sakes, Mars Jack, I knowed it was all up wid me den, for dat ignorant old nigger never did know when it was time to get up off'n his knees! De fac' dat a po' human bein' was in distress wasn't gwine to make a bit of difference wid him. Well, sir, it was jes' like I 'spected it'd be. Dey brought me out, and old Jake, de old villun, started in, and as fast as he prayed de warden come down on me wid a whip dat cut like a knife. I never did want to hear a pra'r come to an end so bad in my life, but it weren't any use. Every time I thought he was mos' through old Jake took a fresh hold, and down come de licks harder'n ever. Shorely it seemed to me like he prayed a month, and, Mars Jack, I wants to tell you right now dat I am sot against long pra'rs for de rest uv my life."

—Washington Post.

The Retired Burglar.

"They tell me," said a retired burglar, "that nowadays people put babies in cribs to sleep; that they don't rock 'em in cradles any more, and that may be so. I suppose it is; but they used cradles years ago, when I was younger. I shall never forget seeing a mother rocking one once, when I was on one of my professional visits.

"You know, I thought I heard somebody sort of crooning as I went up stairs, and I halted and listened and thought I could make it out, and when I got up on the floor above at the head of the stairs, I could make it out plainly enough—a mother singing to her child, and I could locate, too, the room that the sound came from.

"The hall was dark; there was only the faintest sort of a turned-down light coming from the room where the singing was, and I thought I could pass the door without being seen, because I could see her easy enough right through the wall, bending over the cradle, and it never occurred to me that she might look up, because I didn't think she'd hear me, or that she could see in that light if she did.

"But as I was going past the door absolutely noiseless, but looking in as I passed, I saw her bending over the cradle, as I had expected, and rocking it with one hand, but her head now slightly raised, and, as I could dimly see by the outline of her figure in that light, looking across the cradle toward the door, where I was passing. And as she looked, still rocking the cradle with the other, she held up her right hand with the palm toward the door, and the singing was stopped and she was saying very softly to whoever was passing:

"'Sh—,' meaning, 'don't wake the baby!'

"Then I could see, when I had tiptoed past, right through the wall, just as easy as I could before, that right hand dropping to the cradle again, or drawing up the coverlid on the child, perhaps, and I could really hear her crooning again, just as I had before. Now that I had passed she paid no more attention to me than if I had never existed. Her heart was in the cradle; and all she asked of anybody was that they wouldn't wake the baby.

"Now, what could a man do under such circumstances? Nothing, I reckon, except what I did do. After I had stayed there in the hall, on the other side of the door, a minute I started back; this time she didn't look up. I have no doubt, if she saw me or heard me at all, instinct told her I was going."

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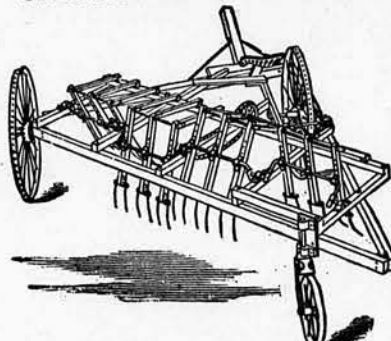


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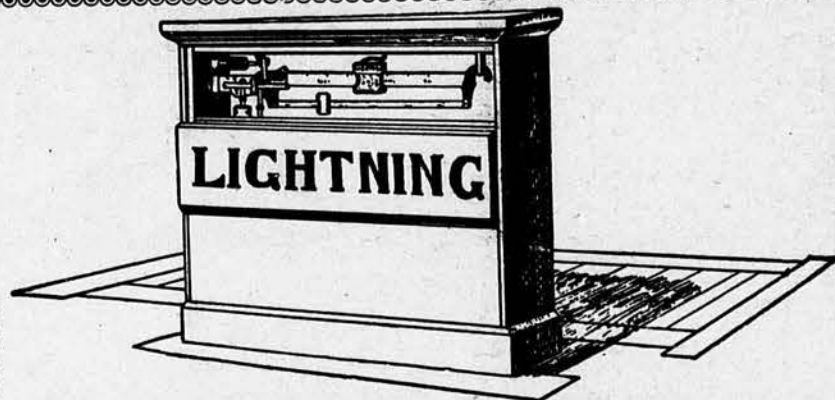
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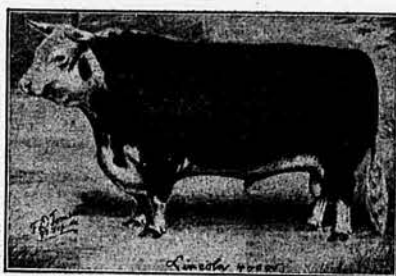
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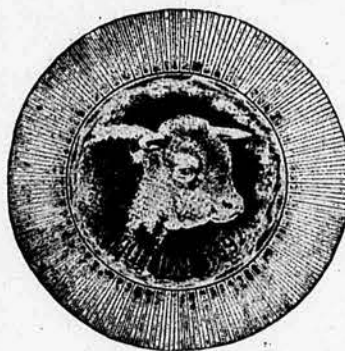
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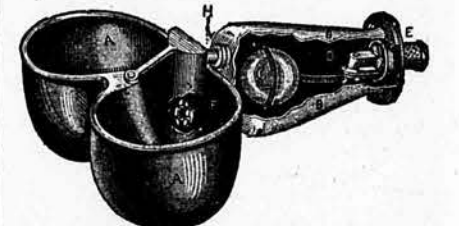
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20th Kansas Attention!!

BINDER TWINE 7 1/2, 8 1/2, 9 1/2 cents per pound. GET UP CLUBS. KANSAS CITY TWINE COMPANY, Station "A," Kansas City, Mo.

The "Dewey" Double Automatic Stock Waterer.



Valve eight inches in water; governed by water closet brass float which cannot rust, freeze nor allow mud to collect under it. Attachable to tank, barrel or pipe instantly by the most inexperienced. Waters 150 to 300 hogs a day, also sheep, calves, chickens and ducks. Stock Fountain Co., Lake City, Ia.